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KONSTANTIN ALEKSANDROVICH SHEMEROVSKY 75 YEARS OLD

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КОНСТАНТИНУ АЛЕКСАНДРОВИЧУ ШЕМЕРОВСКОМУ 75 ЛЕТ

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On January 1, 2023, Konstantin Aleksandrovich Shemerovskiy, an excellent healthcare worker, doctor of medical sciences, professor of the Department of Outpatient Therapy and Propaedeutics of the Private Educational Institution of Higher Education “St. Petersburg Medical and Social Institute”, turned 75 years old. After graduating from the First Medical Institute of Leningrad named after academician I.P. Pavlov in 1973, creative activity of K.A. Shemerovskiy was associated with the Institute of Experimental Medicine (IEM).

At first, he had residency in the Laboratory of Physiology of digestion, and then work as a junior researcher in this laboratory. Since 1988, K.A. Shemerovskiy had been being a senior researcher in the Laboratory of Physiology of Visceral systems, and since 2016 he has been being the head of the Laboratory of Physiology of Visceral systems at the IEM.

Konstantin Aleksandrovich is not only a theoretical scientist, he also has good practical experience. As a student at the First Medical Institute of Leningrad named after academician I.P. Pavlov, he worked as an anesthesiologist in surgery department of hospital No. 40 of Sestroretsk, and combined his work as a junior research fellow at the IEM for more than 10 years with the position of a doctor at the Leningrad ambulance station. Over these years, he had also



accumulated experience in teaching at the Department of Pharmacology the Leningrad Chemical-Pharmaceutical Institute (he taught the fundamentals of pharmacology) and at the Department of Normal Physiology of the I.P. Pavlov St. Petersburg State Medical University.

In 1979, he defended the thesis "Myoelectric activity of duodenum during its periodic activity" for the degree of candidate of medical sciences. Scientific research in the field of gastroenterology is devoted to the problem of pathogenesis of gastric ulceration, study of chronophysiological patterns of pathogenesis of duodenogastric reflux, as well as the research on circadian rhythms of physiological and pathological motor-evacuation activity of the intestine.

In 1987, on initiative of Academician of the Russian Academy of Sciences Alexander Mikhailovich Ugolev, K.A. Shemerovsky participated in the development of physiological terms in the field of basic, applied gastroenterology and became one of the authors of "Dictionary of Physiological Terms".

K.A. Shemerovsky developed the chronophysiological method of investigation motor-evacuation function of intestine called "Chronoenterography", as well as the "Express method for assessment of quality of life", which made it possible to put forward a concept of clinical and pathogenetic variants of the occurrence and course of disorders of the intestine evacuatory function. He proposed new chronophysiological classification of development stages and substantiated the diagnostic criteria for three main degrees of constipation severity according to the degree of deviation of the frequency and acrophase of circadian rhythm of an intestine from the optimal physiological norm. Konstantin Aleksandrovich studied natural relationship between regularity of circadian rhythm of an intestine and acrophase of this rhythm. He proved that one of the main mechanisms of desynchronization in digestive system is a shift in acrophase of circadian rhythm of an intestine from the optimal morning period to pessimal (the worst for this function) afternoon period. K.A. Shemerovsky proposed new terms: "intestinal bradyarrhythmia" is a disruption of circadian intestinal rhythm in the form of its slowing down and irregularity, as well as "bradyenteria" (by analogy with "bradycardia") which is slowing of intestinal rhythm with its frequency below 7 times a week; "optimal acrophase" is a morning implementation of circadian rhythm of intestinal evacuation; "pessimal acrophase" is an afternoon implementation of circadian rhythm of intestinal evacuation function.

In 1995, K.A. Shemerovsky became a laureate of international science competition of the Soros Foundation, and in 1999 he became a diploma winner of competition for the best scientific work on gastroenterology in Russia, held by the Russian Gastroenterological Association under the leadership of Academician of the Russian Academy of Medical Sciences, Vladimir Trofimovich Ivashkin. And in 2004, he became a diploma winner of scientific and practical competition of the Russian Society for the Study of the Liver at XIX Russian Congress "Hepatology Today". K.A. Shemerovsky is a member of the Russian Gastro-

enterological Association and an honorary member of the National school of gastroenterologists and hepatologists of the Russian Gastroenterological Association, as well as a member of the Gastroenterological Scientific Society of Russia. He is a regular participant in the Russian Annual Gastroenterology Week and the United European Gastroenterology Week.

In his chronophysiological studies, K.A. Shemerovsky pays great attention to key risk factors of desynchronization, which at the earliest stages manifests itself, first of all, in the disruption of temporal phase structure of circadian rhythm of an intestine. He found that circadian desynchronization of the intestine is one of the important risk factors for pathological symptoms in patients with multiple sclerosis. Konstantin Aleksandrovich was able to prove that bradyenteria is the dominant risk factor for varicose veins of lower limbs. In his publications, lectures for doctors, as well as in reports at conferences and symposia, he attaches particular importance to dominant significance for disorders of regularity of circadian rhythm of intestinal evacuation function to such elementary risk factor for desynchronization as untimeliness (acrophase shift) in the implementation of this function. K.A. Shemerovsky managed to prove that bradyenteria is substantially more significant and earlier risk factor for cholelithiasis than obesity. He proved that intestinal bradyarrhythmia is one of the prenosological risk factors for metabolic syndrome, since persons with an irregular intestinal rhythm have much higher risk of obesity than individuals with euenteria.

In 2004, Konstantin Aleksandrovich defended the thesis "Chronophysiological features of gastroduodenal myoelectric activity and intestinal evacuation function" for the degree of doctor of medical sciences.

Being a member of the Problem Commission "Chronobiology and Chronomedicine" of the Russian Academy of Medical Sciences, chaired by Academician of the Russian Academy of Medical Sciences Fyodor Ivanovich Komarov, K.A. Shemerovsky proved that physiological significance of the factor of timeliness of acrophase of circadian rhythm of the intestine for regularity of its evacuation function and for maintaining an optimal level of health is commensurate with combined importance of three main factors of this regularity: adequate nutrition, sufficient physical activity and optimal sleep-wake cycle. A study of such components of quality of life as well-being, motor activity and mood in patients with intestinal bradyarrhythmia showed that regularity of circadian rhythm of evacuation function of the intestine is associated with significantly higher level of quality of life in humans than slowdown in this rhythm in the form of bradyarrhythmia.

Based on the epidemiological studies conducted by K.A. Shemerovsky of bradyenteria screening in 2,500 phy-



sicians in St. Petersburg and Moscow, it was established that physiological norm of intestinal evacuation function is characteristic of only 56 % of the population, while bradyenteria is detected in 44 % of the population. In addition, three main levels of incidence of constipation were discovered: I is a prenosological level (27 % of the population), II is a premorbid level (13 % of the population), and III is a pathological level (4 % of the population). Due to the fact that prenosological and premorbid levels of intestinal desynchronization (which primarily depend on the inadequate behavior of a person himself) are almost 10 times higher than pathological level, K.A. Shemerovsky attributes a person's deliberate neglect of need for regular bowel movements every morning (natural bowel habit — Bowel Habit) to type of so-called "autopathogeny", the concept of which was developed by Corresponding Member of the Russian Academy of Sciences, Professor Gleb Borisovich Fedoseyev.

In 2002, with help of the chief gastroenterologist of the Health Committee of the Government of St. Petersburg, Evgeny Ivanovich Tkachenko, K.A. Shemerovsky developed and published "Guidelines for diagnosis and treatment of constipation", and in 2007, methodological recommendations for doctors "Guidelines for diagnosis, treatment and prevention of constipation" was also published.

K.A. Shemerovsky proposed use of a new medical technology, chronoenterography, for noninvasive screening and prenosological colorectal cancer prevention at the earliest disturbances of intestinal circadian rhythm. At invitation of the editor-in-chief of the scientific and practical journal "Donosology" Professor Mikhail Petrovich Zakharchenko, K.A. Shemerovsky was included in the Editorial Board of this journal. Since 2007, K.A. Shemerovsky had become a member of the Board of the St. Petersburg Society of Therapists named after S.P. Botkin. Since 2008, Dr. K.A. Shemerovsky is a member of the Specialised Academic Council D 001.022.02 for the defense of candidate and doctoral dissertations in specialties 03.00.25, Histology, cytology, cell biology (medical and biological sciences), and 14.00.16, Pathological physiology (medical and biological sciences) at the Institute of Experimental Medicine, and a member of the Specialized Dissertation Council D 215.002.03 in specialties 14.00.16, Pathological physiology, 14.00.32, Aviation, space and marine medicine and 19.00.02, Psychophysiology at the Military Medical Academy named after S.M. Kirov. As a member of the Problem Commission "Chronobiology

and Chronomedicine" of the Russian Academy of Medical Sciences, headed by Honored Scientist of the Russian Federation Semyon Isaakovich Rapoport, K.A. Shemerovsky took active part in the First Russian Congress on Chronobiology and Chronomedicine with International Participation in Vladikavkaz in October 2008. Dr. K.A. Shemerovsky has authored more than 200 scientific, research, and practical publications on the problems of diagnostics and prevention in gastroenterology and oncology, on patterns in chronophysiology, on methods and approaches in prenosology, on the problems of gerontology and preventive medicine. In the guide for doctors "Geriatrics" in 2019, Dr. K.A. Shemerovsky presented together with Professor Lidiya Pavlovna Khoroshinina, three chapters on digestive diseases. On initiative of Leonid Borisovich Lazebnik, in recent years, Dr. K.A. Shemerovsky has been repeatedly invited to congresses and conferences held by the Gastroenterological Scientific Society of the Russian Federation in Volgograd, Samara, and Moscow.

In 2022, at the age of 75, Konstantin Aleksandrovich was awarded the prize of the International Committee of the Medicine-2042 Congress (Tel Aviv, Israel) for the best poster report on the topic "Bradyenteria syndrome and immune system", presented an electronic poster report (jointly with P.V. Seliverstov and R.K. Kantemirova) "Bradyenteria syndrome and comorbidity" at the United European Gastroenterology Week 2022 (Vienna, Austria), and also presented a verbal report "The influence of mineral water Bilinska Kyselka on the health of young and elderly patients" at the 70th Anniversary Scientific and Practical Conference with International Participation "Modern Medicine: Traditions and Innovations" in Dushanbe (Tajikistan).

In 2022, in Moscow, at the 17th National Congress of Therapists with International Participation, Dr. K.A. Shemerovsky took part in the symposium organised by Professor L.B. Lazebnik and presented a scientific report on the topic "Bradyenteria syndrome increases risk of obesity and arterial hypertension". In St. Petersburg, at the XXI Congress of Therapists and General Practitioners of St. Petersburg and the Northwestern Federal District of the Russian Federation, a report was made on "Bradyenteria syndrome and cardiovascular pathology".

The Editorial Board of the journal wishes Konstantin Aleksandrovich good health, active vigor, human happiness and further creative success in his productive work.