



### **The Department of Physiology of Tbilisi State Medical University**

(short historical review)

The university Chair of Normal Physiology was founded in January 1919 at Tbilisi State University, and it served to University's all faculties studying physiology. The first head of the Chair was professor Varlam Moseshvili. From autumn 1919 the Chair was led by professor Ivane Beritashvili, who was elected for this position while still working in Odessa. On December 12, 1925 at the Medical Faculty separate Chair of Physiology was established, professor V. Moseshvili was nominated as the head.

The University Chair was led by: professor Varlam Moseshvili (1919), professor Ivane Beritashvili (1919-1926), the Faculty Chair – by professor Varlam Moseshvili (1926-1929). Later this Chair was led by: professor George Vatsadze (1929-1945), Corresponding Member of the Academy of Sciences professor Alexander Bakuradze (1945-1985), Corresponding Member of the Academy of Sciences professor Archil Asatiani (1985-2004).

In 1919-1930 the staff of the Chair: professor Valerian Moseshvili, professor Ivane Beritashvili; assistants – Boris Antelidze, Alexander Bakuradze, Dimitry Gedevanishvili, Sergo Narikashvili, Salome Klimiashvili.

In 1930-1960 and following years the staff of the Chair: professors George Vatsadze, Alexander Bakuradze, Dimitry Gedevanishvili, docents – Nino Beburishvili, O. Gelashvili, A. Pantskhava, GiviVepkhvadze, assistants – Archil Asatiani (later – docent, professor, head of the Chair, Corresponding Member of the Academy of Sciences), MegiDateshidze (later – docent), NadezhdaSalukvadze, Tina Nikolaeva (later – docent), George Mirziashvili, GuramBekaia (current

Tbilisi State Medical University rector advisory board member, professor), Nino Maisuradze, Avtandil Abesadze, Tinatin Mkheidze.

For many years the main direction of scientific research work of the Chair of Physiology was the study of neurohumoral mechanisms of body's food activity. It was found, that food activity was regulated by different brain structures – from stem parts to hemispheres cortex. And important functional correlations between them are being formed from the moment of food intake and continued during the digestion process. The authors of fundamental, high scientifically valuable works in this field are Alexander Bakuradze and Archil Asatiani – coryphaeus of Georgian physiology; they impulsed the scientific research in this field not only in Georgia but in the whole world; the scientific renome of their works currently is still very high.

Later researches, led by professor Archil Asatiani and professor Irine Kvachadze, were focused on the organism's health somatic and mental parameters management and on working capacity increase resources finding, definition of “norm” and “pathology” conception range within the homeokinesis, study of organism's physiological systems cooperation. In this area particularly interesting was woman's organism, as its multiple physiological specificity, most part monthly fluctuation of sex hormones balance, determines adequate adaptation ability of the organism.

The Chair staff in 1998: professor Archil Asatiani – the head of the Chair, Corresponding Member of the Academy of Sciences, professor Irine Kvachadze, docents Naili Chikhorია and Guram Sanadiradze, senior lecturer Tsetsilia Sokhadze, assistants Aleksii Andghuladze, Lali Modebadze, Lia Rusidze, Marine Kutateladze, Laura Tskhadadze.

From 2004 the Chair and later the Department has been led by professor Irine Kvachadze. In 2006 the Chair of Normal Physiology was renamed to “Direction of Physiology”, with “Direction of Physics and Biophysics” it composed the “Department of Physiology”, and professor Irine Kvachadze was nominated as the head.

From 2006 the Department of Physiology functions as independent educational structural unit; it is included in academic process of all single-stage and bachelor programs, also two master and several PhD programs at Tbilisi State Medical University.

In 2007 the Department of Physiology of TSMU joined the Department of Physiology of former Sports Academy, it's head Durmishkhan Chitashvili and staff were involved in the academic process as lecturers for the Faculty of Physical Medicine and Rehabilitation students.

The cooperation with Physics and Biophysics direction launched several research projects, which are currently carried out. In particular, the researchers group of Department of Physiology led by professors I. Kvachadze and A. Tsibadze continue to study the influence of external factors (geomagnetic, sound and sensory effects) on the male and female organisms, united long-term financed research project with partner universities scientists is being developed.

The current research interests of Department of Physiology is mainly the study of pain physiology mechanisms, implemented with active participation of head of Laboratory of Pain and Analgesia of I. Beritashvili Center of Experimental Biomedicine professor Merab Tsagareli, Department's lecturer. Two PhD researches led by professor Irine Kvachadze and Merab Tsagareli are performed in this subject areas:

- **“Evaluation of pain gender and individual differences”** – PhD student is Marta Apkhazava,
- **“The role of opioid and cannabinoid systems in pain modulation in brain limbic areas”** – PhD student is Natia Tsagareli.

In 2006 it was developed and published almost the first Human Physiology textbook in Georgian, edited by professor Irine Kvachadze and department’s staff, intended for future doctors, and it was the first try to fill a few decades vacuum. In 2008 the textbook’s second, updated and completed edition, was published, in 2009 and later in 2013 was published new format textbook – “Fundamentals of Human Physiology”. It should be noted, that in 2009 students declared “Human Physiology” as the best textbook, and I. Kvachadze – as the author of the textbook – was awarded a diploma. In 2014 it was published new, completed and updated edition of this textbook, and the fifth edition is being prepared at present.

Current academic staff of Department of Physiology: the head of Department professor Irine Kvachadze, associated professors Guram Sanadiradze, Giorgi Chichinadze, Zaza Dumbadze, assistant-professors Darejan Mzhavanadze, Marine Kutateladze, Tamar Giorgobiani. Lecturers: docent Naili Chikhorია, Merab Tsagareli, Laura Tskhadadze, Liana Kakiashvili, Ketevan Ebralidze, Nino Tezelashvili, Erekle Aspanidze. Laboratory assistants are Khatuna Dzmanashvili and Marine Gogelia.