

On December 13, 2001, Professor Boško Barac, MD, DSc, was unanimously elected honorary member of the Croatian Medical and Biological Engineering Society (CROMBES, HDMBT - Hrvatsko društvo za medicinsku i biološku tehniku) at the Society's Annual assembly, at the following proposal of Professor emeritus DSc. EE Ante Šantic. as the Honorary member of the CROMBES:

**Proposal**  
**For the election of Boško Barac, MD, DSc**  
**To the Honorary Member of the CROMBES**

Professor Boško Barac was born in Zagreb on 11 September 1930. He received his education in the Classical gymnasium in Zagreb (1949) and graduated at the Medical Faculty, University of Zagreb (1956). After his specialist examination in neuropsychiatry (1962), he dedicated his work to neurology and clinical neurophysiology, choosing this part of the then common discipline, neuropsychiatry, for the main subject of his medical vocation and scientific interest. Professor Barac was active in different fields of clinical neurology working in the wards of the Neurological Department of Zagreb University Hospital "Rebro". He gained a significant experience in clinical neurophysiology of the central nervous system. Along with the routine EEG diagnostics, with his associates he introduced computerized methods of EEG analysis and specific activation methods of the vestibular functions, used in clinical investigation, as well as the methods of evoked potentials into clinical routine in Croatia.

He got his DSc degree at the University of Zagreb in 1965 with his thesis "The influence of caloric and rotatory vestibular stimulation on the EEG of epileptics", accomplished and written in English during his scientific visit to the Department of Clinical Neurophysiology, University Hospital Uppsala, in the academic year 1964/1965, as a Swedish Institute Fellow.

Biomedical Electronics started developing in Croatia as early as in 1958 with the construction and production of first EEG (electroencephalographic) equipments, later also the nystamographs, rheographs and myographs, in the Laboratory of electronics, headed by Ante Šantic, DSc EE - later Professor at the Faculty of Electrical Engineering and Computing - in the Institute Electrical Engineereng, Zagreb. The medical part of the interdisciplinary team from the very beginning formed professors of Neurology at the Zagreb Medical Faculty

Sergije Dogan and Franjo Hajnšek, later joined by Prof Boško Barac and Primarius Petar Baturic (Zadar). They significantly supported and contributed to the production and wide application of new diagnostic devices in clinical practice, thus enabling quick development of clinical neurophysiological methods in Croatia and in the neighboring Republics of the then Yugoslavia. On the other hand, this made possible continuous professional and scientific cooperation with European countries and the USA. This cooperation was extended to the Faculty of Electrical Engineering in Zagreb, when the lectures on biomedical electronics began in 1970 after arrival of Prof Šantic to this Faculty. At the same time the Laboratory of Biomedical Engineering was founded.

Professor Barac initiated in 1968 the organization of the first Neurological Intensive Care Unit, starting functioning in 1971, with a functionally connected Clinical Laboratory for Computerized Processing of Neurophysiological Data and Sensorimotor Functions (1973). Resulting from his interest in neurophysiological investigations of vestibular system he was granted as a Principal Investigator a NIH (National Institutes of Health, Bethesda, USA) Project on vestibular influences on cortical activity (1972 - 1978), with a USA Project Officer a Yale Professor of Neurology Gilbert H. Glaser.

Professor Barac had a special sense for the application of new technological achievements in the field of neurology. Of special significance was his initiative to introduce a systematic teamwork of neurologists and experts in medical electronics. Prof. Barac employed Velimir Išgum, BSc EE, in the newly formed Neurophysiological Laboratory: with the involvement of Išgum, who gained in this collaboration, within the project of NIH, his Master's and DSc EE degrees, a permanent link was established between Neurological Department of the Medical Faculty and the Faculty of Electrical Engineering. Prof Šantic's associate, Miroslav Kolaj, BSc EE, later also joined Prof Barac's team at the Neurological Department. In the above-mentioned Laboratory medical doctors and electrical engineers made their master's and doctoral theses, thus widening the conception of interdisciplinary cooperation as a prerequisite of modern medicine, especially of neurological research and clinical work. Prof Barac and his associate DSc EE Velimir Išgum took part in the postgraduate courses at the Medical Faculty and were in charge of the corresponding courses at the Faculty of Electrical Engineering in Zagreb.

Professor Barac published more than 200 scientific papers, 90 summaries from congresses and symposia, 40 chapters in books, textbooks and monographies, and issued 9 monographies, books and textbooks; he did also a comprehensive editorial work (Congresses and Symposia Proceedings). These published works reflect his professional interest and

activities, covering a broad spectrum of neurological and clinical neurophysiological issues: problems of diagnosis, therapy, prevention and rehabilitation of cerebrovascular diseases, tumors of the central nervous system, multiple sclerosis, brain trauma sequelae, epilepsy, developmental and child neurology, evaluation of working capacity of neurological patients, application of modern computing methods in clinical neurophysiology, clinical problems of vestibular functions and their clinical neurophysiological parameters, intensive neurology, neurology of aging, behavioral neurology, problems of neurological rehabilitation, organization of neurological services in Croatia and in the world.

For many years he has been a contributor of "Croatian Lexicographic Institute Miroslav Krleža", contributing to Medical Encyclopedia, Medical Lexicon, Eight-language Dictionary of Medical Terminology, and Croatian Encyclopedia.

Professor Barac has wide experience in international scientific activities, by participating in the exchange of Croatian experts with the neighboring countries, especially Slovenia, as well as with experts from the USA, UK, Austria, and Germany. He is a member of many professional and scientific associations in his country and the world, among others: Croatian Academy of Medical Sciences, American Academy of Neurology (Honorary Corresponding Member), American Neurological Association, South-East European Society of Neurology and Psychiatry, World Federation of Neurology (Chairman of the RG on Organization and Delivery of Neurological Services). He received important national and international awards.

With his entire scientific and professional activity Prof Boško Barac has an important place in Croatian science. With his advocating of interdisciplinary approach in solving the problems of modern medicine he has greatly contributed to the development of biomedical engineering in Croatia.

For all these reasons I propose to Croatian Medical and Biological Engineering Society to elect Prof DSc. Boško Barac, MD, for its **Honorary member**.

Zagreb, 7 December 2001

Professor emeritus Ante Šantić, DSc