DOI 10.1007/s00702-004-0228-6
J Neural Transm (2004) 111: 1509–1510

Journal of Neural Transmission

Obituary – Günter Quadbeck

S. Hoyer

Department of Pathology, University of Heidelberg, Heidelberg, Germany

Accepted August 2, 2004

Dr. med. Dr. rer. nat. Günter Quadbeck, Professor emeritus for Pathochemistry and General Neurochemistry at the University of Heidelberg, Germany, died on June 25, 2004. Günter Quadbeck was 89 years old.

Quadbek studied chemistry and medicine at the Universities of Munich and Heidelberg. He was awarded the Doctor habilitatus for biochemistry at the University of Heidelberg in 1959, after which he headed the Department of Neurochemistry at the University of the Saar in Homburg until 1965. From 1965 to 1980 he chaired the Institute of Pathochemistry and General Neurochemistry of the University of Heidelberg.

Günter Quadbeck began his scientific career at the Max-Planck-Institute for Medical Research in Heidelberg where he joined the group of the Nobel laureate Richard Kuhn. He investigated the organ-specific effects of acetylcholinesterase inhibitors and their detoxification. In animal experiments, he demonstrated that a vitamin E deficit increased the sensitivity of acetylcholinesterase inhibitors whereas a vitamin E-rich diet reduced this effect. These findings may be relevant for the current treatment of Alzheimer disease.

Continuing his research on the toxic side effects of pharmaceutical substances, Quadbeck studied glyoxal which damages the pancreas and induces diabetes mellitus. In current research, the glyoxalase system is of central interest because it detoxifies methylglyoxal which is known to contribute to the formation of e.g. AGES.

During his research career, Quadbeck discovered diverse effects of glyoxal on different brain regions and suggested various metabolic activities in those areas. These results formed the basis for subsequent work on the function of the blood-brain barrier under physiologic and pathophysiologic conditions. Quadbeck was among the first to describe the transport mechanism for glucose across the blood-brain barrier and characterized brain diseases as having a labile blood-brain barrier function such as brain tumors, epilepsy and some schizophrenias.

A focus of his scientific work was to prove the significance of the glucose metabolism of the brain and its abnormalities for neurodegenerative brain disorders such as dementia. In the 1960s and 1970s, the discussion of the causation of such brain disorders was dominated by brain blood flow research.

Quadbeck decided to establish a brain metabolism research group in his institute. In cooperation with clinics, the first data were published showing that abnormalities in cerebral glucose metabolism were of greater pathophysiologic significance than changes in brain blood flow or oxygen consumption in e.g. dementia. Meanwhile, this knowledge is well accepted and forms the basis for research on the causation of sporadic Alzheimer disease.

Günter Quadbeck was an excellent mentor for his coworkers. He was full of stimulating ideas, but was also very careful in accepting unexpected research data (Comment: check it and be modest). He was highly regarded in the international scientific community (The blood-brain barrier Quadbeck), publishing nearly 150 articles in national and international scientific journals.

With Günter Quadbeck the scientific community loses an outstanding personality whose integrity, tolerance and far-sightedness will always be an example for us.

Author's address: S. Hoyer, M.D., Department of Pathology, University of Heidelberg, Im Neuenheimer Feld 220-221, 69120 Heidelberg, Germany,
e-mail: siegfried_hoyer@med.uni-heidelberg.de