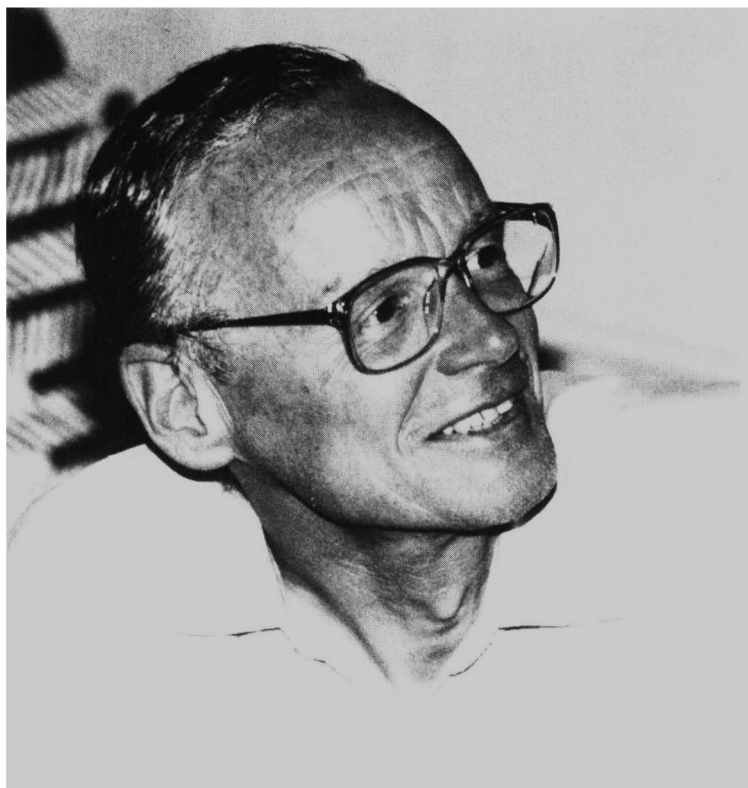


PETER LÄUGER (1934–1990)

The tragic death of Peter Läuger occurred immediately after the meeting of the IUPAB Council at the International Biophysics Congress in Vancouver in August 1990. Peter Läuger was a member of the Council. His opinion was most highly regarded, not only in his own field, that of membrane biophysics, but also in all other matters of science. His personal attitude combined with this eminent knowledge made him one of the most respected members of the biophysical community. It came as a shock when we learnt about Peter's death in the Venezuelan mountains shortly after the meeting in Vancouver.



Peter Läuger, 1990. Photo taken by one of his students.

Peter Läuger was born on 9 May 1934 in Lörrach, a small town close to the German–Swiss border. After grammar school in Lörrach he studied chemistry, physics and mathematics at the Universities of Basel and Hamburg. He obtained his Ph.D. degree in physical chemistry in 1961 at the University of Basel. Together with his teacher Werner Kuhn, he published his first papers on transport phenomena in membranes, a field which would later become his speciality. In 1964, after a post-doctoral period with Reinhard Schlögl at the Technical University of Darmstadt, he became Privatdozent for physical

chemistry at the University of Basel. Peter Luger stayed in Basel until 1968, when he was appointed full professor of biology at the newly founded University of Konstanz.

One of Peter Luger's assets was his ability to transform a complex biological phenomenon into its basic elements, which could each be analysed and described in terms of physical chemistry. He immediately realized the importance of the work of Paul Muller and his colleagues in Philadelphia on black lipid membranes as model systems for studying various aspects of membrane transport. He was one of the first to apply the voltage clamp analysis used in studies of the squid axon by Hodgkin and Huxley to planar lipid membranes and to interpret the results in terms of chemical relaxation. The relationship between chemical relaxation and voltage fluctuations as pointed out by Zingsheim and Neher in 1974 had its counterpart in Luger's contribution on the correlation of electrical noise in lipid bilayer membranes. Together with his collaborators in Konstanz, Peter Luger analysed the elementary behaviour of ion carriers such as valinomycin, of ion channel-forming peptides, particularly gramicidin A, and of energy-driven ion pumps. In all of his work he combined elegant experiments with rigorous theory. Peter Luger's last publication concerned electrogenic ion pumps, and his last lecture given at Woods Hole was on 'The kinetic basis of voltage dependence of the Na,K pump'. A summary of Peter Luger's key articles can be found in G. Stark's article (*Biophys. J.* (1991) **59**, 1–3).

Those who had the privilege to know Peter Luger will always remember his kind and modest attitude, which was combined with a critical sense for the scientific problem.

Peter Luger has contributed to *Quarterly Reviews of Biophysics* by his work on chemical relaxations of ion transport systems. The editors and authors of this issue as well as the International Union of Pure and Applied Biophysics would like to dedicate this special issue to the memory of Peter Luger and his outstanding contributions to membrane biophysics.

RUDOLF RIGLER   RICHARD HENDERSON