

IN MEMORIAM PROF. DR. KLAUS RUCKPAUL

On December, 3, 2017 our colleague, mentor and friend Klaus Ruckpaul passed away after short disease.

Klaus Ruckpaul was born in Eisenach/Thuringia (Germany) on May 29, 1930. He started his studies in 1951 at the Humboldt-University in Berlin, School of Medicine, the "Charite". In 1957 he finished his M.D., already studying for the first time (indirectly) hemoproteins. After a practical year as a general physician, he realized that he wants to understand more about the biochemical, biophysical and physiological basis of disease and he started in the 60ies his scientific work on hemoglobins at the Academy of Sciences of the GDR. He was especially interested in the spectral properties of this protein and studied the magnetic susceptibility, optical rotational dispersion and the circular dichroism of hemoglobins.

In 1975 Klaus Ruckpaul switched from hemoglobin to cytochromes P450 investigating P450 LM2, now termed as P4502B4 and became one of the worldwide known experts in this field. Again, mainly biophysical methods were used to get insight into the reaction mechanism and structure of this class of proteins. His most important achievements were the kinetic investigation of the elementary steps in the P450 reaction sequence, the description of the spin-state equilibrium in microsomal P450s demonstrating that the spin-state conversion is not the rate-limiting step in microsomal P4502B4, as well as investigations of protein-protein interactions in microsomal P450 systems. In the late 80th Klaus discovered his love to the steroid hydroxylating P450s and in 1988 he established a crystallography group at the Institute of Molecular Biology in Berlin-Buch. It was a great disappointment for him that after the "Mauerfall" his successful P450 group did not fit into the portfolio of the new organization. Although his group was considerably reduced after the reunification of Germany and closing down of the Academy of Sciences of the GDR at the end of 1991, after several years of hard work with a very small group he succeeded to crystallize the adrenodoxin/adrenodoxin reductase complex providing the first structure of a cytochrome P450 associated redox partner complex.

A very important achievement was his idea to start the first P450 symposium in the Series: "Cytochrome P450. Biochemistry and Biophysics" (organized by him and Sinisa Maricic in Primosten). Jugoslavia was chosen to held the first International Symposium in this field, bringing together researchers from the East and the West and the symposia were

held alternatingly in Eastern and Western countries to allow scientists from Eastern countries to regularly meet the international group of P450 researchers. The success of this meeting series was mainly due to Klaus Ruckpaul's high professionalism, his always stimulating discussions and his integrating personality. Only recently the 20th meeting in this series was held in Düsseldorf. Klaus was very interested in the program and outcome of this meeting asking many questions about new approaches and results when we were discussing this issue in September.

Another important achievement of Klaus Ruckpaul is his editorial work. In 1984 he edited together with Horst Rein a comprehensive book on "Cytochrome P450". In 1989 he, again together with Horst Rein, started editing a series of P450 books: Frontiers in Biotransformation, where 9 volumes came out. After his official retirement, he continued his editorial work (together with Detlev Ganten) with a book on the "Grundlagen der molekularen Medizin", the "Encyclopedic Reference of Genomics and Proteomics in Molecular Medicine" and a series of books called "Handbuch der Molekularen Medizin".

Remembering Klaus would not be complete without mentioning his inherent dedication to science and his generosity. He was a strong mentor challenging his coworkers with his accuracy, deep scientific interest and high originality. Our group in Berlin was always open for people to collaborate with us in different fields but also for people to be trained in some of the methods we were using.

Since Klaus passed away, I was exchanging experiences with several people about Klaus as a person, scientist and mentor. He impressed many of us with his dedication to science and his wisdom and touched many with his kindness and friendship.

Klaus: we will miss you!

Prof. Dr. Rita Bernhardt
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