



## Abstracts of Minisymposium organized by Prof. M. Göthert

### Forty years of Polish-German cooperation: Landmarks in the development of partnership

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The friendly and fruitful cooperation between German and Polish pharmacologists was initiated at the Congress of Polish Pharmacological Society in Lodz in 1973 by Prof. Ulrich Trendelenburg and Prof. Jerzy Maj, ex-soldiers who served in enemy armies during the second world war. Having the traumatic experience they strongly believed that making new human relationships is necessary and possible and that joint activities even in a relatively narrow field of science, like pharmacology can contribute to this process. This idea was supported by Prof. Eric Westermann who invited young Polish pharmacologists to participate in the Congress of the German Pharmacological Society (DPhG) in Hanover three years later. Since then researchers representing both nations regularly and actively have taken part in scientific events organized across the communist “iron curtain”. Thus, Polish researchers participated in the Congresses of DPhG in Munich, Travemünde, Freiburg, Akwizgran, Mannheim, Hamburg and Koln. On the other hand, many German pharmacologists were active participants of eighteen Congresses organized by the Polish Pharmacological Society, e.g. in Szczecin, Katowice, Poznań, Warsaw, Lublin, Białystok, Gdansk, Białystok, Krakow and others. The Polish Pharmacological Society bestowed the title of a Honorary Member on professor Ulrich Trendelenburg in 1980 and professor Manfred Göthert in 1998 for their great achievements in pharmacology and their efforts in promoting this science in Poland. It should be emphasized that during the difficult period under communist rule, the enormous help of German pharmacologists to Polish scientists in terms of providing the newest information, pharmacological tools and expertise as well as in founding fellowships for Polish scientists cannot be overestimated. Several hundred good quality joint scientific reports were published and a number of scientists' exchange programs were successfully realized. The most comprehensive long-term collaborative scientific projects of Polish pharmacologists have been carried out jointly with their colleagues from the Max-Planck Institute of Psychiatry, Max-Planck Institute of Experimental Medicine, University of Heidelberg, University in Hamburg, Free University in Berlin, Otto von Guericke University in Magdeburg, University of Ulm, University in Bonn and many others. In the united Europe and in the post-genomic era marked by a rapid

implementation of modern molecular tools into pharmacological studies, there have emerged new challenges for Polish and German scientists who wish to cooperate with each other. In relation to this, one should mention an important initiative which took place in 2006 in Warsaw where professor Ernst-Ludwig Winnacker, the former President of Deutsche Forschung Gemeinschaft (DFG) inaugurated the first Liaison Scientists Network on the occasion of the conference on bilateral cooperation in the European Research Area. The aim of this network is to support the existing cooperation between Polish and German scientists, including pharmacologists. Importantly, since 2005 it has been possible for German and Polish pharmacologists to apply to the DFG and to the Polish Ministry of Science and Higher Education for funding for joint research projects.

<http://dx.doi.org/10.1016/j.pharep.2014.02.006>

### Deciphering the functions of the endocannabinoid system using knockout mouse models

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Genetic mouse models together with pharmacological tools are instrumental for functional studies in biomedical research. Powerful methods for the manipulation of the mouse genome were first developed in the late 80s and have been constantly refined during the past two decades. The development of the CRISPR/Cas technology has now pushed the efficacy of genome engineering and its applicability to different species to a new level, thus enabling researchers to produce sophisticated genomic alterations with a relatively small investment in time and effort. CB1 receptor agonists and antagonists have an important therapeutic potential for the treatment of different chronic disorders, such as pain conditions or the metabolic syndrome. However, reported adverse CNS side effects have limited the clinical utility of these compounds. This presentation will provide an overview of mouse models that were used to investigate the numerous physiological roles of the endocannabinoid system, which is instrumental for the development of new drugs with fewer side effects. A particular focus will be on age-related