

## IN MEMORIAM

**Prof. dr hab. Krystyna Kotelko**  
**Professor emeritus of the University of Łódź**  
**(1920–2003)**

Professor Krystyna Kotelko was born on 7<sup>th</sup> November 1920 in Grodzisk Mazowiecki. After graduating from primary school and then Maria Konopnicka State Gymnasium in Warsaw (1938), for one year she studied at the Faculty of Biology and Mathematics of Warsaw University. After the war broke out, she took on the job of a voluntary worker at the City Institute of Hygiene, and later she worked as a laboratory technician in the Bacteriology Department. She was also a member of the Resistance Movement, first in the Scout Soldiers (Szare Szeregi), and next in the Sanitary Services of the Warsaw Headquarters of the Home Army. During the Warsaw Uprising she worked as a nurse in Karol and Maria's Hospital, and after the fall, managed an analytical laboratory in Włodzimierzów near Sulejów.

In 1947 she finished at the University of Łódź her biological studies interrupted by the war and started a job in the State Institute of Hygiene as a Head of the Section for Intestine Infections Diagnostics. In 1951 at the University of Łódź she obtained the doctor of science degree on the basis of the dissertation "Serological classification of hemolysing streptococci isolated from patients with scarlatine", supervised by professor Bernard Zabłocki. Then she started her job as an assistant professor at the Department of Bacteriology, and as a research worker of the University of Łódź, she obtained in 1961 the habilitation degree for the work "Chemical basis of immunological specificity of *Salmonella* O-antigens with a special focus on immunochemistry of group B O5 antigen". In 1969 she was granted the scientific title of associate professor, and in 1976 she became full professor.

In the first years of her scientific research, supervised by professor B. Zabłocki, she focused on the biology of staphylococci, streptococci and *Shigella* rods. Later her interests were directed towards the structure and function of selected bacterial antigens, especially *Proteus* rods. The choice of this particular subject of research was inspired by two one-year studies at the Pasteur Institute in Paris, France and at the Max Planck Institute of Immunobiology in Freiburg, Germany. In 1961 professor Kotelko created the Department of General Microbiology, and for 30 years she was the Head of it. She became also a leader of a very successful team of research workers in immunochemistry, well recognised both in Poland and abroad for initiating on a large scale team research concentrated on the chemical and biological investigation of surface antigens of facultatively pathogenic *Proteus* bacteria.

Professor Kotelko prepared together with coworkers 65 publications of experimental research, 10 review articles, 2 monographic articles on *Proteus* rods and 3 scientific books, which have had a few editions, as well as numerous communications at Polish and international congresses.

The most significant results of the long lasting study on *Proteus* lipopolysaccharides include:

- detection of uronic acids, aminoacids and other sugar derivatives as non-typical lipopolysaccharide constituents,
- determination of LPS chemotypes for the whole genus *Proteus*,
- obtaining and analysis of unique rough mutants from these microorganisms, necessary for structural and biological studies,



- determination of the full structure of complex LPS macromolecule of one *Proteus* strain and a few polysaccharide structures of endotoxins from other serological *Proteus* groups,
- description of the characteristics of the selected factors of *Proteus* rods pathogenicity.

Those results could be obtained due to prof. Kotełko's fruitful cooperation with the major European centres in this field: Max Planck Institute of Immunobiology in Freiburg and Scientific Institute in Borstel (Germany) as well as the Institute of Organic Chemistry, the Russian Academy of Sciences in Moscow. Publications of these studies in leading scientific journals on the international scale made prof. Kotełko's team of workers recognised all over Europe as the "*Proteus* Group".

In recognition of prof. Kotełko's scientific achievements, she was many times appointed as a president of scientific sessions at international conferences and was invited by the leading scientific centres in Europe to give lectures or conduct seminars.

Prof. Kotełko's scientific work was always connected with didactics. She taught a wide range of classes to the students of microbiology where she proved to be an expert using the Polish language, erudition and thorough preparation in the discussed area. Her lectures and seminars were always received with delight and admiration by both students and young scientific staff. Her contribution to teaching and promoting the research workers is worth emphasising. She promoted 8 PhD's, supervised 6 habilitation works and 4 of her disciples became professors. She was a reviewer of 45 doctor's dissertations, 27 habilitation works and reviewed 23 professor's applications. During 4 cadencies as a member of the Central Qualification Committee she prepared 40 opinions concerning habilitations or granting the professor's degrees.

Prof. Kotełko's unquestioned merit for the development of microbiology in Poland, establishing and promoting of the first Polish microbiological programme MR II.17 and its continuation PBP 04.02. This 10-year activity, in which all Polish universities were participating, contributed to the integration of the microbiological community, development of research and introduction of new significant scientific issues.

The recognition of prof. Kotełko's merit for the University of Łódź and the whole country resulted her being awarded with the Gold Medal of the University of Łódź, Gold Cross of Merit, the Polonia Restituta – Cavalier and Commander Crosses, the City of Łódź Reward, the Meritorious Teacher of the Polish Republic, the Medal of the National Education Committee as well as many awards of the Rector, the Secretary of the Polish Academy Sciences, the Ministry of Science and Higher Education.

In the Polish and world science prof. Kotełko was distinguished with the title of the Member of Honour of the Polish Microbiological Society and elected a member of the International Endotoxin Society.

As a human being professor Kotełko was politically straight, scientifically excellent and socially wonderful.

Prof. Kotełko passed away after long lasting disease and suffering. It is very hard to express our grief and sorrow, but our memory about You, dear Professor, Master, Friend and Colleague will remain in our hearts for ever.

*Zygmunt Sidorczyk and Antoni Różalski*