



Professor WŁODZIMIERZ KURYŁOWICZ

Obituary

The death of Professor WŁODZIMIERZ KURYŁOWICZ on February 21, 1991 at the age of 80 is a loss that is keenly felt by all those who have been involved in the research of antibiotics. He had served as an Editorial Board Member of "The Journal of Antibiotics" since its first issue of the International Edition as early as in 1967, and had been elected as an Emeritus in 1990.

He will be remembered as one of the great pioneers of the antibiotic era. We shall miss him, not only for his great contributions to science and medicine, but also as an international personality.

Professor WŁODZIMIERZ KURYŁOWICZ was born September 26, 1910 in Lvov. He was graduated with MD from the Jan Kazimierz University in Lvov in Poland, 1938. Following posts as an Associate Professor of Microbiology at Lvov and as a research bacteriologist at the State Institute of Hygiene in Warsaw he became a Professor of Microbiology at that Institute in 1954. He was the Institute Director from 1965 to 1980. More than 270 works including 3 books are published on such diverse topics as bacterial polysaccharides, antibiotic biosynthesis, numerical taxonomy of *Streptomyces* spp., evaluation of BCG and microbial ultrastructure.

He carried out research on taxonomy and immunochemistry of *Klebsiella* sp., *Shigella* sp., *Proteus*; BCG vaccine. Professor WŁODZIMIERZ KURYŁOWICZ has studied antibiotic biosynthesis in Canada and the U.S.A. He became well-known for his research on classification of antibiotics, numerical taxonomy of genus *Streptomyces*, ultrastructure of *Streptomyces* and *Penicillium chrysogenum* in course of antibiotic production and strain improvement for industrial purposes.

He was a member of research staff at the State Institute of Hygiene, Warsaw 1947~58; member of research staff of the Institute of Tuberculosis and of the Institute of Antibiotics, Warsaw 1959~63; chairman of the Scientific Council of the Ministry of Health and Social Welfare, Warsaw 1962~70; president of Jakub Potocki Foundation for tuberculosis and cancer research 1962~70; chairman of the Coordination Commission for the Polish-American Program for Scientific Collaboration in Medical

Research 1962~70; member of WHO Expert Committee on Antibiotics 1959~79; member of the Executive Committee of the International Union of Biological Sciences (IUBS) 1979~82; member at large of the Executive Board of the International Association of Microbiological Societies (IAMS) 1978~82; vicepresident of the International Union of Microbiological Societies 1982~86; visiting professor of the International Children Center in Paris 1954~56; visiting professor, invited by Academia Sinica 1955, 1957~58, 1973, 1982; visiting professor, invited by the Institute of Antibiotics, Federal University of Pernambuco, Recife, Brasil 1961~62, 1979, 1981, 1983~84; member of UNEP/UNESCO/ICRO Panel on Microbiology 1976~83.

Professor WŁODZIMIERZ KURYŁOWICZ was a recipient of the National Prize Award for scientific guidance in construction of the first antibiotic industry in Poland, 1950 and the National Prize Award for the co-authorship of the monograph "Antibiotics—origin, nature and properties" (Pergamon Press) 1968. He was decorated with the Officer (1951), Commander (1959), Commander with Star (1968) of the Order Polonia Restituta; Banner of Labour, 1978; Order of Physician of Merit, 1979; Order of Friendship, People's Republic of China, 1958; Commander with Star of Finnish Lion, 1971; Knight's Cross of the Legion of Honor, France, 1976.

Professor WŁODZIMIERZ KURYŁOWICZ was a member of the following academies of sciences: Polish Academy of Learning, Cracov, 1950; National Academy of Medicine, Brasil, 1961; Polish Academy of Sciences, 1964; Academy of Medical Sciences USSR, 1966; National Academy of Medicine, France, 1969; German Academy of Sciences, 1970; Academy of Finland, 1980; Royal Academy of Medicine, Belgium, 1983, and the honorary member of scientific societies: Hungarian Society of Public Health, 1968; Italian Society for Chemotherapy, 1971; Society of Epidemiologists, Microbiologists and Infectionists, USSR, 1971; Japanese Association for Actinomycetes Research, 1973; Society of Applied Microbiology, Egypt, 1974; Pharmaceutical Society, Egypt, 1974; Polish Medical Society, 1974; Hungarian Society for Microbiology, 1976; Polish Society for Microbiology, 1983; French Society for Microbiology, 1987.

He was a recipient of Doctorates honoris causa of: Nicolas Copernicus Medical University, Cracov, 1975; University of Oslo, 1976; University of Lille, 1977; Medical University of Debrecen, Hungary, 1978; University of Liège, Belgium, 1980; Federal University of Pernambuco, Recife, Brasil, 1982; University of Québec, Canada, 1985; University of Münster (Westf.), Germany, 1988.

In 1970 he began the work on the cellular organization of penicillin G biosynthesis. The first results were published in the "Atlas of ultrastructure of *Penicillium chrysogenum* in course of biosynthesis of penicillin" in 1980. The localization of the enzymes involved in penicillin G biosynthesis in the cells of *Penicillium chrysogenum* was studied by electron microscopy and cell fractionation. The enzyme δ -(L- α -aminoadipyl)-L-cysteinyl-D-valine synthase, the cytosolic enzyme isopenicillin N-synthase and the acyltransferase, an enzyme involved in the last step of penicillin G biosynthesis, were located in vesicular organelles. Penicillin G was located in cellular compartments of about 600 nm in diameter. The separated from the protoplasts of *Penicillium chrysogenum* vesicular organelles showed a cell-free biosynthesis of penicillin G. Further experiments were conducted on improvement of *Streptomyces* strains for the commercial use by protoplast fusion and regeneration. Screening for strains producing exocellular DD-carboxypeptidases allowed to elaborate a technology for the production and purification of DD-carboxypeptidase from *Saccharopolyspora erythraea*. These results provided new possibilities for screening for *Streptomyces* producing β -lactam antibiotics and for its modification.

Professor WŁODZIMIERZ KURYŁOWICZ had many close friends in the field of antibiotic through the world. Friends and colleagues in many countries will wish to offer their sympathy to Mrs. BARBARA KURYŁOWICZ.

(WIESŁAW KURZATKOWSKI)