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Editorial

The beginning of scientific research in biochemistry in Gdańsk after the end of World War II

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In the first number of the first volume of *Acta Biochimica Polonica* 50 years ago two papers from Gdańsk were published from the academic biochemical center which was set up by professor Włodzimierz Mozołowski – the first editor of *Acta Biochimica Polonica*. It would be of interest to review the reasons which led to the fact that in Gdańsk, shortly after it was taken over by the Soviet army, after its plundering and burning, one of the professors of the Stefan Batory University who came from Vilnius to Gdańsk started not only to revive academic teaching there but also to organize scientific societies and to start investigations in biochemistry. The aim of this short text is not to present the course of these frequently dramatic events but thanks to the initiative and permission from the current editors of *Acta Biochimica Polonica* I may briefly justify taking up this subject of the works mentioned at the beginning and to show some incidents of the postwar confusion accompanying the organization of laboratory facilities.

Professor Mozołowski, who was 50 years old at that time, a former associate professor and collaborator of Jakob Karol Parnas in Lwów, and then head of the Chair of Medical Chemistry of the Stefan Batory University in Vilnius – worked very hard in Gdansk to organize a group of persons who could participate in aca-

demically teaching and start doing research. These attempts sometimes failed in ways which were sometimes tragic, but they also brought successes. Professor Mozołowski assumed that in the existing difficult times the subject of research must be suitable for the conditions. His interest was directed to blood serum proteins. The methodological achievements of American medicine during the war were impressive. One of them was the method of Philips Van Slyke to determine plasma protein concentration and hemoglobin concentration in blood by dripping in full blood and serum or plasma into CuSO_4 solutions of different specific densities. This was a strikingly simple method which was accessible under the primitive laboratory conditions. Mozołowski compared this method with two other methods. One of them was the measurement of the refraction coefficient by an immersion Pulfrich refractometer, which had been found in hospital ruins. The second was chemical determination of protein and non-protein nitrogen by a modified Parnas-Wagner method. The equipment for distilling ammonia by this method and the equipment for burning samples were put together in the lab which was being organized with a lot of work by the professor's young collaborators. One of Mozołowski's excellent ideas was to utilize the discrep-

ancies in the results of assaying proteins by different methods to draw conclusions about the change in the content of the protein fractions in the analyzed fluids and also to determine the properties of a protein-free blood ultrafiltrate. The publications mentioned above are based among others on these calculations and conclusions.

With time the equipment of the post-war biochemical laboratory was enriched, sometimes in an unusual and unexpected way. The beginning of such an unusual event was the information provided by one of the physicians of the Marine Fleet in Gdynia, commander Dr. Dolatkowski, that on a side-track there was a carriage containing some equipment which the withdrawing Germans were sending West. When Professor Mozołowski went to see what was there, it turned out that among others the carriage contained a centrifuge and many other objects from his former laboratory in Vilnius. This centrifuge was subsequently used for many years in Gdańsk.

At another time there were news that at a submarine base which had belonged to Germans there were still many reagents in large bottles and the present crew at the base was very willing to get rid of them. The containers turned out to be 5 and 10 liter bottles containing an alcohol phenolphthalein solution. This was one of the reagents used as indicator of carbon dioxide accumulation in German submarines. The bottles were brought to the department. This had two positive effects. Shortly after bringing them the laboratory technician found out that a Soviet army unit

has a lot of laboratory glassware which they were willing to exchange for alcohol. The transaction which took place was based on providing the Department with a large horse-drawn platform of laboratory glassware in exchange for three bottles of alcohol (with phenolphthalein). The second, long-term benefit of the transaction with the sailors from Oksyw was that for many years we had a supply of an alkacidity indicator.

It is worth noting that gifts from the American UNNRA and from Sweden also contributed an enrichment of the chemical material supplies. The Swedish Red Cross very generously and with care provided in the first post-war period the academic hospitals in Gdańsk with beds, blankets, sheets and other very necessary goods. These supplies also included chemicals, in general in large amounts, similarly as in gifts from UNNRA. For many post-war years we had in our depot several barrels of borate, many jars of boric acid, elemental sulphur, and also sodium sulphate (bitter salt) which was very useful for salting out proteins, in situations when ammonium sulphate was inappropriate.

The several examples given above of supplying material goods to the biochemical scientific center in Gdańsk were given here to illustrate past times. Since then the theme and methodology of biochemical investigations initiated in Gdańsk by the first editor of *Acta Biochimica Polonica* and currently performed in numerous academic centers in Gdańsk has become immensely broader and has developed considerably.