

PROF. GŁOSNICKA HEADS A SUCCESSFUL STARTUP COMPANY IN THE GROWING BIOTECH INDUSTRY

IMMUNOLAB Comp. Ltd. manufactures and sells a number of different in vitro diagnostics and related services. This company was established in 1999 by Prof. Renata Głośnicka with the purpose of transferring the biotechnology research products to commercial utilization.

This company is involved in research and development of the technology needed for the production of the vaccines against animal salmonellosis, production and preparation of the diagnostic sera, and polyclonal antibodies with the purpose of routine diagnosis and research. Most of the products were originally developed for the in-house use. These products are increasingly being sold in the domestic market.

Prof. Głośnicka was employed for more than 40 years in National Salmonella Center in Poland; first as an assistant and from 1980 as a chief of the Center. The Center was established by Prof. Buczowski in 1952 in the Institute of Maritime and Tropical Diseases in Gdańsk. In 2003 it was transferred to the Medical University in Gdańsk. The conducted epidemiological investigations showed a very high number of Salmonella infections in humans and animals in a period between 1982 – 2002. There were more than 1,5 millions people infected with Salmonella bacteria at that time in Poland. About 90 percent of these infections were caused by Salmonella Enteritidis serovar. However, we found infection caused by the other serovars as well. There are over 2500 serovars isolated in the world.

On the basis of these investigations Prof. Głośnicka decided to prepare the new composed, polyvalent vaccine against Salmonellosis in animals. This vaccine (Immunovac) is constructed from the inactivated Salmonella bacteria, consisting of eight serovars, bound with the polyclonal rabbit antibodies, and is proposed for active and passive immunization by oral route against Salmonellosis. The results of the research showed a good humoral and cell-mediated response in animals. Moreover, the Immunovac vaccine is safe for the animals and the environment.

(Publication: R. Głośnicka et al, Immunovac – poliwalentna szczepionka przeciw salmonellozom kur, Medycyna Wet, 2005, 61(10): 1105-1109).

Production of the vaccines against salmonellosis in hens and other animals is based on Patent (R. Głośnicka; Patent – 1 No 169172 from 1996 to the invention entitled "The procedure of obtaining the preparation for immunogenic and/or therapeutic purposes in bacteriological and alimentary infections especially concerning salmonellosis"). The vaccine against salmonellosis in hens is licensed by R&D IMMUNOLAB Comp. Ltd., and produced by BIOWET in Puławy, Poland. The vaccine is applied in a significant number of chicken farms in Poland.

The **R&D IMMUNOLAB Ltd.** produces more than 60 different kinds of Salmonella antisera. The diagnostic O- and H antisera for slide

agglutination are polyclonal and raised by immunizations in rabbits. Since the antisera are carefully controlled and are free of any known cross reactions they can be used for diagnosis of most of all Salmonella serovars.

The R&D IMMUNOLAB Ltd. is a small family firm lead by Prof. Głosnicka together with her daughter (Msc of economy, Dorota Lieder – financial manager) and her son (Msc of architecture, Krzysztof Głosnicki – director general). Krzysztof, in addition, has his own firm. He designed several houses, which are beautifully integrated into the landscape of Pomeranian villages.

The employees of the R&D IMMUNOLAB Ltd are as follows: Msc of Biology, Msc of Biotechnology a trainee on a one year contract, a Specialist of Marketing, and three technicians. R&D IMMUNOLAB Company Ltd. is involved in preparing training courses for students in identification and typing of Salmonella strains for all kinds of diagnostic laboratory.

The research projects completed and planned:

1. The study of the composed polyvalent vaccine against salmonellosis in other animals.
2. Preparation of the new technology for production the antibodies in hens. We would like to substitute the rabbit antisera with the antibodies isolated from egg yolks.
3. Preparation the rabbit antisera against Salmonella O bacteriophage for the quick test to identify Salmonella serotype and bacteriophage type on Bio-chip (in cooperation with research teams from Medical University of Gdańsk and University of Gdańsk).
4. Preparation of the new (about 130 different kinds) Salmonella antisera for slide agglutination..