On the Problem of So-called Nonspecific Titers of Antibodies against Teschen Disease Virus (TDV) in Pig Serum. B. KORYCH, F. PATOČKA, Institute of Medical Microbiology and Immunology, Charles University, Medical Faculty, Prague.

Nonspecific antibodies against TDV appear in low titers in sera of some pigs. According to Mayr and Hecke's interpretation their presence does not depend on a specific antigenic stimulus. The present report gives some evidence of the dependence of these so-called nonspecific antibodies on the degree of colostral immunity and infection with TDV. The inability of new-born piglets to multiply the avirulent clone A3b of TDV after intranasal infection accompanied by a negative immunological response was taken as evidence of resistance to the infection and was correlated to the level of circulating antibodies expressed in serum titer. Groups of new-born pigs possessing various titers of colostrally transferred antibodies were intranasally infected with $10^{8.3}$ $TCID_{50}$ of the avirulent A3b clone of TDV per 0.5 ml on the second and fourteenth day after birth. Blood samples were taken before and on the 4th, 14th and 2st day after the infection. Evaluation of antibody titers showed that titers up to 16 are limiting for the development of resistance at the site of primary viral multiplication. Titers of antibodies in the range of 16 to 32 in some instances permit the induction of an antibody response to TDV infection which however is followed by low titers of neutralizing antibodies. Convincing evidence was obtained, that the presence of so-called nonspecific titers of antibodies against TDV in pigs may be explained and interpreted as a consequence of the spcific viral antigen under immunological conditions of the macroorganism due to persisting low-titer colostral antibodies.

Immunological Response in Children to the Application of Influenza Haemagglutinin Vaccine. H. ZÁVADOVÁ, V. VONKA, Research Institute of Immunology, Prague.

One dose of haemagglutinin vaccine produced the formation of antibodies specific mainly to virus strains with which the individual age groups had met before. With small children (age 6 months to 1 year) significant formation of antibodies was induced only after two doses of the vaccine. Antibody levels were assayed by haemagglutination-inhibition and complement-fixation tests using strain- and type-specific antigens and the results of the two tests were compared.

Cross-Reactivation of Influenza A-NWS Virus by the A-WS Virus in the System of Hamster Tumor Cells. E. TUČKOVÁ, V. VONKA, Research Institute of Immunology, Prague.

The virus strains used in this study were antigenically identical; they showed, however, differences in a number of genetic markers. Infection of hamster tumor cells with inactivated NWS virus and with active WS virus resulted in a cross-reactivation. Isolated virus lines were purified using the plaque technique and their genetic markers determined.

Electrophoresis of the Components of Influenza Virus Poly-Acrylamide Gel. G. RUSS, G. RUTTKAY-NEDECKÝ, Institute of Virology, Slovak Academy of Sciences, Bratislava.

Purified A_2 (Singapore) influenza virus disintegrated with ether was divided into nucleoprotein (NP) and haemagglutinin-neuramidase (HNC) complexes using electrophoresis in agarose suspension. The heterogeneity of the NP complex was investigated by means of electrophoresis in a mixed acrylamide-agarose gel. At acrylamide concentrations up to 1.5%, the complex produced a single electrophoretic zone. Its heterogeneity became evident at higher acrylamide concentrations. Maximum number of zones, 5, was detected in a gel containing 3.5% acrylamide. Similar heterogeneity was also found by sedimentation analysis. Short incubation with ribonuclease caused an apparent homogeneity of NP complex even in gel containing 3.5% acrylamide. Individual electrophoretic components probably represent NP fibers of various lengths. The virus and its subunits were dissociated to polypeptide chains using dodecyl sulphate and dithiothreitol. The chains were then analyzed by electrophoresis in polyacrylamide gel in order to find protein components constituting the virus and its subunits. Virus proteins yielded three major and one minor zones, NP complex two and HNC two major and two minor zones. On comparing the mobilities of virus and standard proteins approximate molecular weights of the virus proteins were found ranging from 12,000 to 70,000. The two electrophoretic zones found for NP suggest that its protein part consists of two types of polypeptide chains. However, the zones might correspond to two aggregates of the same subunit differing in the number of monomers. The problem is being further investigated.

Virus-Antibody Reaction in an Immunodiffusion Test. B. STYK, L. HÁNA, D. BLAŠKOVIČ, Institute of Virology, Slovak Academy of Sciences, Bratislava.

The reaction of myxoviruses with antibodies was tested by the method of double diffusion in agarose gel. The antigens used were different strains of influenza virus, either in the form of purificates disintegrated with sodium deoxycholate or ether, or as virus subunits. The antisera used came from people who had previously urdergone influenza, or from hyperimmunized or infected animals. The