

# Bacteriology and Infectious Diseases

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## Hepatitis B/C occurrence in blood donors of Yerevan city

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**Purpose:** Blood transfusion safety is one of the main problems of hematology. The detection of hepatitis B and C in blood donors of Yerevan city was the purpose of current study.

**Materials & Methods:** Samples of blood were studied by ELISA method using AXSYM automated analyzer (Abbott-system). Blood samples were collected by “d-VAC Gel and Clot activator” tubes. Blood serum was separated by centrifugation (6000 xg; 10 min). Samples were assayed in the day of blood collection.

**Results:** Results of investigations for period of 2013-2014 years are presented here. In 2013 the number of donations was 7555. Hepatitis B surface antigen (HBsAg) was detected in 1 (0.01%) cases; antibodies to hepatitis B core antigen (Anti-HBc) were revealed in 296 (3.9%); hepatitis C antibodies (HCV) were shown in 29 (0.38%) cases. Above it, we detected 26 (0.34%) HBsAg+Anti-HBc and 13 (0.17%) HCV+Anti-HBc double positive samples. In 2014, the quantity of studies was 8341.3 (0.035%) samples were positive to HBsAg; 329 (3.94%) tests were positive to Anti-HBc; HCV was shown in 48 (0.57%) cases. HBsAg+Anti-HBc were detected in 43 (0.52%) and HCV+Anti-HBc double positive results were described in 10 (0.12%) cases.

**Conclusion:** Increasing dynamics of blood donations was characterized for the studied period. In the same time the revealing of donors data and Anti-HBc and HBsAg+Anti-HBc mixed detections were increased. On the other hand, in 2014 was shown the enhancement of HCV-positive cases. Results of HBsAg and HCV+Anti-HBc studies were stable.

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## Evaluation of the combined use of the recombinant *Brucella abortus* Omp10, Omp19 and Omp28 proteins for the clinical diagnosis of bovine brucellosis

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Currently, there are several serodiagnostic tools available for *Brucellosis*; however, it is difficult to differentiate an active infection from vaccination. Hence, there is a great need to develop alternative means that can distinguish between these two conditions without utilizing lipopolysaccharide (LPS). This study was an attempt to determine the efficacy of combined recombinant *Brucella abortus* outer membrane proteins (rOmps) and individual rOmps in the serodiagnosis of *Brucellosis* by enzyme linked immunosorbent assay (ELISA), utilizing both that standard tube agglutination test (TAT)-positive and negative serum samples from Korean native cattle. The results are very interesting and promising because the combined rOmp antigens used in the study were highly reactive with the TAT-positive serum samples. The combined rOmps sensitivity, specificity and accuracy were 215/232 (92.67%), 294/298 (98.66%) and 509/530 (96.04%), respectively. While these results are preliminary, the tests performed have very high potential in the serodiagnosis of brucellosis and likewise, the combined rOmps can be used for future vaccine production.

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