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Highly productive antigenic active HCV variants are suitable for cultural inactivated vaccine preparing

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The development of an HCV vaccine is an obvious necessity as an overall 50% of treated patients do not experience significant long-term benefits from the current regulated interferon and ribavirin-based combination therapy. Such a development, however, meets with many obstacles. No vaccine is yet available. Several vaccine approaches, essentially therapeutic, are currently in development. An *in vitro* model of an infection caused by different HCV variants is developed. It has allowed isolating highly productive HCV variants from human blood serum samples. It was shown that isolated HCV variants propagate actively in cell cultures a various origin: PS, Vero, BHK-21, primary chick embryo fibroblasts. HCV strains induce cytopathogenic effect in the infected cell cultures, an infectious titers of HCV reaches 7,0-8,0 lg10TCID50/ml. Detailed identification of isolated HCV variants BFC is spent. It is shown that HCV strains have the ability to be neutralized by the antibodies containing in human blood serum using neutralization test, virus antigens can detect HCV antibodies by immune enzyme test, immune precipitation method, as well as by immune fluorescence method. By RT PCR method it was possible to detect HCV RNA in cultural medium samples collected from HCV infected cell cultures. It was shown that HCV strains isolated don't lose cytopathogenic properties and ability to propagate in cell cultures throughout many subcultures (15-20). HCV strains have an ability to induce HCV specific neutralizing antibodies in mice and rabbits. Data obtained testify to prospect of cultural inactivated vaccine against hepatitis C developing.