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### Influenza in Russia in 2014-2016

Tatyana Ilyicheva, A Durymanov, V Marchenko, I Susloparov, N Kolosova, N Goncharova, S Svyatchenko, O Petrova, O Gureeva, V Mikheev and A Ryzhikov  
Vector State Research Center of Virology and Biotechnology, Russia

In total 3888 blood serum samples were collected in October-November, 2014 in Russia, including 1939 samples collected from poultry farm workers. The presence of antibodies to influenza viruses in the sera was tested in hemagglutination inhibition test. None of the samples produced positive results with influenza A(H5N1), A(H5N8) and A(H7N9) viruses. 41% of the samples are positive to A/California/07/09 (H1N1pdm09), 36% of the samples are positive to A/Texas/50/2012 (H3N2), 40% of the samples are positive to B/Brisbane/60/2008 (Victoria lineage) and 47% of the samples are positive to B/Massachusetts/2/2012 (Yamagata lineage). Only 40% ( $\pm 7\%$ ) of 1383 sera positive to vaccine strain A/Texas/50/2012 (H3N2) had significant titers with A/Switzerland/9715293/2013-like virus. In 2014-2015, fifteen influenza A(H3N2), two A(H1N1pdm09) and one B (Yam) virus strains were isolated from autopsy and clinical material from individuals with severe course of influenza-like disease. In 2015-2016, we isolated 105 influenza A(H1N1pdm09), one influenza A(H3N2) viruses from autopsy material and 226 influenza A(H1N1pdm09) and four influenza A(H3N2) viruses from nasopharyngeal swabs. Virus A/Khabarovsk/6/2015 (H3N2) showed reduced sensitivity to oseltamivir (18-fold below normal). All other viruses exhibited normal inhibition by oseltamivir and zanamivir. A(H1N1pdm09) viruses were antigenically characterized as A/California/07/2009-like. Their HA gene sequences fell into genetic group 6B, the predominant genetic group. H3N2 isolated viruses were characterized as A/Hong Kong/4801/2014-like and A/Switzerland/9715293/2013-like, their HA gene sequences belong to genetic groups 3C.2a and 3C.3a, respectively. Influenza B virus was antigenically similar to B/Phuket/3073/2013, its HA sequence belongs to genetic group Y3. In 2014, we isolated influenza A(H5N8) virus from a Eurasian wigeon (*Anas penelope*) in Eastern Siberia. The strain A/wigeon/Sakha/1/2014 (H5N8) was shown to be pathogenic for mammals. It is similar to the strains that caused outbreaks in wild birds and poultry in Southeast Asia and Europe in 2014. In spring 2015, we isolated three influenza A(H5N1) viruses from wild birds in the South of Western Siberia. All strains were pathogenic for mammals and showed reduced anti-neuraminidase drug sensitivity.

### Biography

Tatyana Ilyicheva has completed her PhD from Lobachevsky State University of Nizhni Novgorod and Postdoctoral studies from Vector State Research Center of Virology and Biotechnology. She is the Head of Influenza Laboratory of Vector Center and Associate Professor of Novosibirsk State University. She has published more than 20 papers in reputed journals.

[ilyicheva\\_tn@vector.nsc.ru](mailto:ilyicheva_tn@vector.nsc.ru)

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