

First swine flu NCDC approved laboratory in uttarakhand

Molecular Diagnostics Tests

H1N1 (Swine Flu) Qualitative, Real Time PCR Test

Influenza Virus: There are three types of influenza viruses: A, B & C. A & B viruses are most common among the three. Especially type A virus is known to be common for infecting not only humans, but also birds & various types of mammals. Among the influenza viruses that invade humans H1N1 & H3N2 are becoming a problem for infecting children & elders. Type B & C are limited to affecting human only. Seasonal Influenza: Type A influenza viruses are further divided into subtypes according to kinds & combinations of viral surface proteins. Among many subtypes of influenza A virus, H1N1 & H3N2 subtypes are the recent ones circulating among humans. Swine Origin Influenza A Virus H1N1 subtype (H1pdm09):H1N1, a subtype of influenza A virus, is the most common cause of influenza (flu) in humans. Some strains of H1N1 are endemic & are also responsible for a small portion of all influenza- like illness & a large portion of all seasonal influenza. In June 2009, the World Health Organization (WHO) declared that a new strain of swine - origin H1N1. H1N1 was responsible for the 2009 flu pandemic & raised the alert level of phase 6. This strain is commonly called swine flu. The swine origin H1pdm09 isolated from patient in the United States was found to be made up of genetic elements from 4 different flu viruses- north American Mexican influenza, north American avian influenza, human influenza & swine influenza viruses typically found in Asia & Europe. This new stain appears to be a result of re-assortment of human & swine influenza viruses, in all 4 different stain of subtype H1N1 This lab is as approved center for the testing of swine flu (H1 N1) virus by National Center for Disease Control (NCDC), New Delhi, Govt of India.

SARS-COV-2 (COVID-19) Real-time PCR

This lab is authorized by MoH GoI for Covid-19 testing under ICMR Registration. A single negative test result, particularly if this is from an upper respiratory tract specimen ,does not exclude infection and should not be used as the sole basis for treatment or other patient management decisions. These results are not to be used for any thesis or presentations or for publication in any Journal without prior permission of the Director General,ICMR.

Mycobacterium tuberculosis complex Real-Time PCR

This test is intended for the detection of all members of the M.tuberculosis complex (M. tuberculosis, M. africanum, M. bovis, M. bovis BCG, M. microti, M. pinnipedii) TB is a chronic disease mainly affecting the lung & the associated lymphnodes. However, depending upon the immune status of the patient M.tuberculosis bacteria can colonize other organs. TB is primarily transmitted from person to person via

aerosols. Only people with active disease are contagious. Especially in immunocompromised people M.tuberculosis can be reactivated even years after initial infection.

HPV DNA screening and genotyping test

This test detects oncogenic HPV types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 66, 67 and 68.

Cancer of the uterine cervix is the most common malignant tumor in women world-wide & represents a major public health problem in south-east Asia. Human Papilloma Virus (HPV) has emerged as a major pathogen associated with this disease. It has been shown from several studies that HPV infection is a good marker for women with cervical neoplasia and precancerous lesion. Women persistently infected with certain oncogenic HPV types show a high rate of progression of dysplasia to invasive cancer of the cervix. Thus diagnosis of HPV infection may facilitate easy identification of women at increased risk of developing Cervical cancer. A negative result does not exclude the possibility of infection with high risk HPV since very low levels infection or sampling error may cause a false-negative result. Infection with HPV indicates that the woman is at a higher risk of developing cervical cancer. Most women infected with high risk HPV types do not develop high grade lesions or cancer.

HLA-B27 Real time PCR

HLA-B27 Real time PCR is a test for qualitative detection of HLA-B27 allele in human blood. HLA-B27 is a major histocompatibility complex (MHC) class I molecule. The presence of HLA-B27 antigen is strongly associated with ankylosing spondylitis and a few rheumatic disorders (Reiter's syndrome, acute anterior uveitis and inflammatory bowel disease). The results from this test must be interpreted within the context of all relevant clinical and laboratory findings.

HSV 1&2 DNA SCREENING AND GENOTYPING TEST

-This test is intended for use in conjunction with clinical presentation and other laboratory markers for disease prognosis.

HEPATITIS C VIRUS RNA VIRAL LOAD

Infection with Hepatitis C virus leads, in a high number of cases, to a chronic liver disease & fibrosis. Some patients may develop into liver cirrhosis, even hepatocellular carcinoma (HCC). Currently, Interferon alpha (in combination with Riboflavin) is the only proven, effective treatment. However, only some chronic hepatitis C patients respond to this expensive interferon therapy. This test is intended for use in conjunction with clinical presentation and other laboratory markers for disease progression and for use as an aid in assessing viral response to antiretroviral treatment as measured by changes in plasma HCV RNA levels. This test is not intended to be used as a screening test for HCV or as a initial diagnostic test to confirm presence of HCV infection.

Hepatitis C Virus (HCV) Genotyping Test

HCV Genotyping test is used for qualitative detection of HCV genotypes 1, 1a, 2(2a/2b), 3, 4, 5a and 6. If other subtypes are present, a false negative result may occur. This test should not be used for screening of blood or blood products or as a diagnostic test to confirm the HCV infection.

HEPATITIS B VIRUS DNA VIRAL LOAD

Hepatitis B virus is mainly transmitted through blood or blood products. However sexual, oral & perinatal infections are also possible. Symptoms include general malaise, appetite loss, vomiting and abdominal problems, fever, exanthema (skin rash) as well as rheumatoid joint & muscle problems. 2-14 days later jaundice develops, which may be accompanied by itching. Fulminant hepatitis occurs in about 1% of all infected patients and is frequently fatal. 5-10% of hepatitis B patients develop chronic liver inflammation, which can progress to cirrhosis of the liver or primary liver cell carcinoma. This test is intended for use in conjunction with clinical presentation and other laboratory markers for disease prognosis and for use as an aid in assessing viral response to antiviral treatment as measured by changes in EDTA plasma HBV DNA levels. This test is not intended to be used as a screening test for HBV or as a diagnostic test to confirm the presence of HBV infection.