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FOR IMMEDIATE RELEASE

Sun Pharma & NIV sign agreement to fight Zika, Chikungunya and Dengue

Mumbai, Pune & New Delhi, June 27, 2017: Sun Pharma (Reuters: SUN.BO, Bloomberg: SUNP IN, NSE: SUNPHARMA, BSE: 524715, Sun Pharmaceutical Industries Ltd and includes its subsidiaries or associate companies) and The National Institute of Virology (NIV), Pune, an institution of the Indian Council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, New Delhi today announced that they have signed an agreement for testing phytopharmaceutical, biologic and chemical entities developed by Sun Pharma against Zika, Chikungunya and Dengue viruses. Sun Pharma will provide drug molecules to NIV for testing against Zika, Chikungunya and Dengue in model systems. Candidate molecules with encouraging data will then be taken forward for commercial development.

Sun Pharma and NIV aim to promote discovery sciences, translational health research and development of medical products, which is in sync with the direction provided by Govt. of India's 'Make In India' initiative. Sun Pharma's agreement with NIV follows its MOU with Indian Council of Medical Research (ICMR) for conducting joint scientific research and innovation for testing of drugs, biosimilars and vaccines and disease control and elimination programs.

Together, Sun Pharma and NIV will work together to respond to significant and emerging public health threats in India and rest of the world due to viruses: Zika, Chikungunya and Dengue. These are arboviral diseases that have rapidly spread across globally in the last decade, and have often led to large-scale endemic outbreaks in tropical and sub-tropical countries.

While these viral diseases are transmitted to humans by infected *Aedes* mosquitoes, Zika and chickungunya viruses are genetically related. These three diseases pose major public health concern due to lack of any vaccine or any specific therapeutic drugs to treat or cure. The patients are given symptomatic treatment.

Commenting on the agreement signed with NIV, Mr. Kirti Ganorkar, Executive VP & Head, Global Business Development, Sun Pharma, said, "Our agreement with NIV for developing drugs against Zika, Chikungunya and Dengue is part of our broader commitment for developing new and improved vaccines and drugs against arboviruses that are of significant health importance to India and rest of the world. Our decision to partner with NIV was made following extensive due diligence and consultations on existing programs globally."

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According to Dr. Devendra Mourya, Director, NIV, Pune, "Dengue and Chikungunya are major public health problem in India like most of the tropical and subtropical countries. Recently, rapid spread of Zika virus across the world has added threat to the list of Aedes borne infections. Unfortunately, yet no effective antivirals and vaccines are available for these infections. Our agreement with Sun Pharma aims to find a solution to these unmet needs"

ZIKA OVERVIEW: Zika virus (ZIKV) is a member of the virus family Flaviviridae. The Zika virus was first isolated in Uganda in 1947. Since the 1950s, it has been known to occur within a narrow equatorial belt from Africa to Asia. From 2007-2016, the virus spread eastward, across the Pacific Ocean to the Americas, leading to the 2015-2016 Zika virus epidemic. The virus was first detected in India in December 2016 in Ahmedabad, Gujarat. The infection, known as Zika fever or Zika virus disease, often causes no or only mild symptoms, similar to a very mild form of dengue fever. Zika can spread from a pregnant woman to her baby. This can result in microcephaly, severe brain malformations, and other birth defects. Zika infections in adults may result rarely in Guillain-Barre syndrome There is no specific treatment or vaccine available for this virus.

<u>CHIKUNGUNYA OVERVIEW:</u> Chikungunya is an infection caused by the chikungunya virus, belonging to the family Togaviridae. The most common symptoms of chikungunya virus infection are fever and joint pain. Other symptoms may include headache, muscle pain, joint swelling, or rash. Outbreaks have occurred in countries in Africa, Asia, Europe, and the Indian and Pacific Oceans. While the disease typically occurs in Africa and Asia, outbreaks have been reported in Europe and the Americas since the 2000s. There is no vaccine to prevent or drug to treat chikungunya virus.

DENGUE OVERVIEW: Dengue is a neglected mosquito-borne viral disease that is rapidly spreading globally. Dengue incidence has increased by more than 30-fold in the past 50 years. Currently, half of the global population lives under dengue threat; and an estimated 390 million infections occur worldwide every year with approx. 100 million cases of clinical disease and over 25,000 deaths. All four dengue virus serotypes are now endemic in India. Currently, there are no available antivirals, which presents a public health challenge in India and other parts of the world, including developed nations. There is no specific treatment other than supportive clinical care, which is extremely difficult in developing countries with poor resources.

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About Sun Pharmaceutical Industries Ltd. (CIN - L24230GJ1993PLC019050):

Sun Pharma is the world's fourth largest specialty generic pharmaceutical company and India's top pharmaceutical company. A vertically integrated business, economies of scale and an extremely skilled team enable us to deliver quality products in a timely manner at affordable prices. It provides high-quality, affordable medicines trusted by customers and patients in over 150 countries across the world. Sun Pharma's global presence is supported by 42 manufacturing facilities spread across 6 continents, R&D centres across the globe and a multi-cultural workforce comprising over 50 nationalities. In India, the company enjoys leadership across 11 different classes of doctors with 30 brands featuring amongst top 300 pharmaceutical brands in India. Its footprint across emerging markets covers over 100 markets and 6 markets in Western Europe. Its Global Consumer Healthcare business is ranked amongst Top 10 across 3 global markets. Its API business footprint is strengthened through 14 world class API manufacturing facilities across the globe. Sun Pharma fosters excellence through innovation supported by strong R&D capabilities comprising about 2,000 scientists and R&D investments of approximately 8% of annual revenues. For further information please visit www.sunpharma.com & follow us on Twitter @SunPharma_Live

About NIV, Pune:

Since 1953, National Institute of Virology, Pune is an apex institute in the country for carrying out viral infections . r under the Indian Council of Medical Research (ICMR) New Delhi. This institute has developed comprehensive infrastructure facilities like tissue culture, epidemiology, biochemistry, immunology, and medical zoology for research in arbovirology. NIV is recognized as the World Health Organization (WHO) Regional Collaborating Centre for Reference and Research on Arboviruses, Influenza and Measles as well as National Reference Centre for Hepatitis, Avian Influenza and emerging infectious diseases. WHO collaborating center for strengthening capacity for emerging infectious diseases. NIV conducts high quality of applied and basic research in the areas of epidemiology, molecular biology, immunology, diagnostics, vaccinology, prevention and control strategies for viruses of public health importance, by creating a center of excellence, safe workplace and risk-free environment, through the establishment of state-of-the-art laboratories and development of appropriate human resources. NIV was the first institute that confirmed the occurrence of many arboviral diseases in India viz. Japanese encephalitis (JE), Chikungunya, West Nile Kyasanur Forest Disease (KFD), and Chandipura etc. Institute investigated over 250 epidemics in the past and discovered 24 new viruses. Institute's thrust areas in viral diseases of public health importance are identification, characterization of etiological agent of outbreaks / epidemics, development of newer & rapid diagnostics, establishment of surveillance & monitoring systems, molecular epidemiology of viruses of public health, development of vaccines and immunotherapeutics, manpower development in Virology etc.

For Further Information Please Contact Sun Pharma

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