

NOVARTIS INSTITUTE FOR TROPICAL DISEASES



“Instead of just giving money, which may not be the best thing because the money may not go where it is supposed to go and the patients may not get what they need, Novartis decided that it would contribute with pure, hard, science. We will leverage the experience, the technology, and the databases in the powerful Novartis family to try to come up with good treatments.”

*– Dr. Paul Herrling, Head of Corporate Research, and
Chair of the Novartis Institute for Tropical Diseases*

Access to Care

The key role of the pharmaceutical industry is to discover, develop, produce, and market innovative products to prevent and cure diseases, to ease suffering, and to enhance the quality of life. According to the World Health Organization, infectious diseases carry 10 percent of the global disease burden and cannot afford to be neglected any longer.

Novartis’ investment in the field of tropical disease research is an exception in an industry that has traditionally neglected illnesses that are seen as endemic within the developing world. The NITD aims to discover novel treatments and prevention methods of major tropical diseases. In those countries where such diseases are prevalent, the Novartis Group intends to make treatments readily available without profit. The NITD’s long-term aim is to help reduce the global disease burden of tropical diseases and improve the prosperity and health of the populations of all developing countries.

Partnerships

The Novartis Institute for Tropical Diseases (NITD) in Singapore is the result of a collaborative research investment between Novartis AG and the Singapore Economic Development Board (EDB).

The Singapore Dengue Consortium consists of six organizations, including the NITD, focused on research into dengue fever. These organizations have signed a collaboration of understanding for dengue fever with the intention of exploring ways to better understand and manage dengue infection and ultimately minimize the incidence of dengue in Singapore, and around the world.

The Global Alliance for TB Drug Development is a public-private partnership driven to halt the rise and reverse the spread of tuberculosis. Novartis and the Global TB Alliance are currently coordinating efforts at the NITD in Singapore. Both parties are also pursuing a more concrete and expanded collaboration in the area of TB drug-discovery.

Tuberculosis

Tuberculosis (TB) is a leading cause of death and disease worldwide. TB is a bacterial infection caused by *Mycobacterium tuberculosis*. In 2000 it was estimated that one third of the world population (two billion people) were infected. According to the World Health Organization, close to eight million people become infected, and two million people die every year from this disease.

The spread of TB has been linked to urban crowding, inadequate diagnostic and treatment infrastructure, globalization and world travel, and misdiagnosis. The emergence of drug-resistant mycobacterial strains has led to an increasing number of multidrug-resistant TB cases (MDR-TB). According to an estimate by the WHO, 50 million people worldwide are infected with MDR-TB. Left untreated, each person with active TB will infect between 10 and 15 people annually. Tuberculosis has reached epidemic proportions due in part to immunocompromised patients, with diseases such as HIV, residing in endemic areas.

Dengue Fever

Dengue and Dengue Haemorrhagic Fever (DHF) are caused by four closely related viral strains. The virus is transmitted to humans through the bites of infected mosquitoes (*Aedes aegypti* and *Aedes albopictus*). Infection with one of the viral strains does not guarantee immunity from the other three. When a person who has already fought one strain of the disease contracts another of the viral strains, it can cause severe forms of DHF or Dengue Shock Syndrome (DSS). The global prevalence of Dengue has risen dramatically, and the disease is now endemic in more than 100 countries in Africa, the Americas, the Eastern Mediterranean, and the most serious outbreaks are found in Southeast Asia and the Western Pacific. The World Health Organization estimates that 50 million cases occur each year, requiring 500,000 hospitalizations. Since 1986, the incidence of DHF has quadrupled.