Addressing the Growing Threat of Dengue

The Global Public Health team at Johnson & Johnson is advancing breakthrough science against dengue, building on our longstanding commitment to accelerate solutions for neglected tropical diseases through innovation and collaboration.

THE CHALLENGE

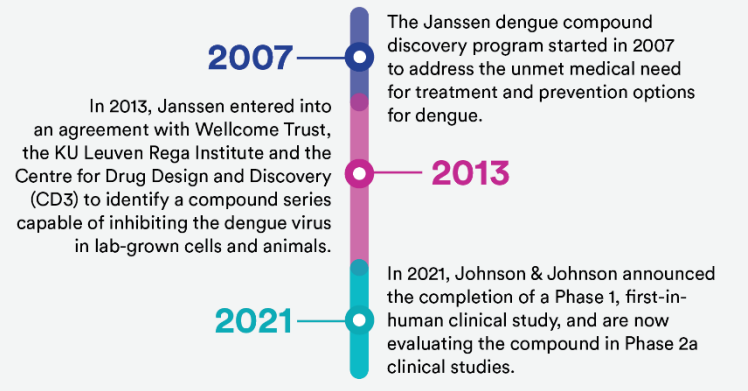
Dengue ranks as the world's most rapidly-spreading mosquito-borne virus, with nearly half the global population at risk for infection and as many as 400 million people infected each year.[1] The incidence of dengue has grown dramatically in recent decades and is expected to impact billions more[2] as the climate warms and the Aedes species mosquito that carries the dengue virus spreads further from its native regions. An August 2021 report from the Intergovernmental Panel on Climate Change warns that warming temperatures could potentially drive an increase in vector-borne diseases, like dengue, and make it harder to predict outbreaks.[3]

Research and development (R&D) efforts have proven challenging, in part because of dengue's multiple serotypes, each of which can cause reinfection and co-circulate in the same regions. According to the U.S. Centers for Disease Control (CDC), there are no specific antiviral agents or therapeutics available, and only a single vaccine with restricted use has been licensed, underscoring the crucial need for new treatment and prevention options to combat this disease.

OUR RESPONSE

Johnson & Johnson is committed to accelerating solutions to address the significant and growing global health challenge of dengue, especially as the climate continues to change and more communities in more places are put at risk.

Our work against dengue is just one part of our larger, decades-long commitment to address the burden of neglected tropical diseases (NTDs), a group of about 20 communicable, often-debilitating conditions that affect more than 1.7 billion people in nearly 150 countries around the world. Beyond our work on dengue, we are also investing in R&D for other NTDs, including leprosy, and are continuing to donate our medicine for intestinal worms around the world.



BY THE NUMBERS

1/2
of the world's populations is at risk for dengue

Zero
therapeutics currently available for dengue according to the U.S. CDC

8x
more cases of dengue reported to the World Health Organization (WHO) over the past two decades

2 billion
additional potential people at risk of dengue by 2080 as the climate warms

Footnotes: 1: Dengue and severe dengue, World Health Organization; 2022. https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue 2: The current and future global distribution and population at risk of dengue. Nature Microbiology; 2019. https://www.nature.com/articles/s41564-019-0476-8. 3: AR6 Climate Change 2021: The Physical Science Basis. The Intergovernmental Panel on Climate Change; 2019. https://www.ipcc.ch/report/ar6/wg1/?mkt_tok=MjExLU5KWS0xNjUAAAF--FU4oTHNx9mbdu0WccFqW6hYI3W-nU1bol2TAEmEtsthdQFeRjOOFt16XqLW5krKqlpfJCrD-ViiWA_sDrNrD6CHNpc0XRJ7vzcuxO3ln8UD5g

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Johnson & Johnson

ADDRESSING THE CHALLENGE AT EVERY LEVEL

RESEARCH & DEVELOPMENT

Completed a Phase 1, first-in-human clinical study evaluating a dengue-specific antiviral small molecule, and are now evaluating the compound in Phase 2a clinical studies.

DISCOVERY

Working in collaboration with Duke–NUS in Singapore, Johnson & Johnson launched a new J&J Satellite Center for Global Health Discovery with a focus on flavivirus-related discovery research, including for dengue.

MODELING

Developing a dengue outbreak forecast system as an early response warning tool with university partners to help predict dengue outbreaks ahead of time.

ADVANCING BREAKTHROUGH SCIENCE AND DISCOVERY

In June 2022, Johnson & Johnson launched the first Satellite Center for Global Health Discovery (Satellite Center) in Asia at Duke-NUS Medical School in Singapore. This unique research collaboration brings together leading scientists in the Asia-Pacific region with Johnson & Johnson to help stimulate the early-stage science, innovation and talent development needed to tackle flaviviruses, including dengue, yellow fever, Zika and other viral threats.

J&J Centers For Global Health Discovery

J&J Centers for Global Health Discovery (J&J Centers) are the foundation of a larger, decentralized scientific network that will grow, stimulate local innovation and help drive discovery R&D aimed at addressing critical issues in global health. By partnering with renowned institutions around the world, the J&J Centers unite expertise across the scientific community to where the research is most needed, and the challenges are most acute. Johnson & Johnson has also established Satellite Centers at the London School of Hygiene & Tropical Medicine and the Holistic Drug Discovery and Development Centre (H3D), University of Cape Town.

- **Pressing Regional Threat:** Dengue's burden falls largely on lower- and middle-income countries, with Asia experiencing nearly three-quarters of the global burden of the disease.
- **How It Works:** The J&J Centers are powered by an initial five-year commitment in partnership with a local institution to leverage established infrastructure, like lab space, and recruit local scientific and technical staff.
- **Longstanding Commitment:** Duke-NUS has played a critical role in our dengue research, most recently collaborating to launch Phase 2a clinical trials evaluating Johnson & Johnson's novel dengue-specific antiviral compound for the prevention and treatment of dengue.

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