



First High-Resolution Analysis of Geographical Dengue Transmission Relied on GIDEON's Infectious Disease Database

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We know that GIDEON is one of the most complete data sources worldwide on zoonoses, so we wanted to use it to build our database.

Alisa Aliaga-Samanez

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In June 2021, Alisa and her colleagues published their article “Worldwide dynamic biogeography of zoonotic and anthroponotic Dengue.” It was the first high-resolution analysis of how Dengue transmission has been changing geographically in recent decades. Their findings were significant as they found the Dengue virus now in areas previously considered low risk.

THE CHALLENGE

For Alisa and her colleagues to conduct the study, they needed robust epidemiological data on Dengue cases around the globe. However, all previous models that defined the risk of dengue transmission did not consider zoonotic spillovers. To conduct the study, they had to create their own database that included epidemiology data of all dengue cases combined with sylvatic-dengue cases. Collecting, cleaning, and validating Dengue data from scratch would have been very time-consuming and cumbersome.

THE GIDEON SOLUTION

GIDEON helped the researchers build their databases very quickly and validate their models with more recent cases.

This reliable information then helped them predict new areas that are now favorable to Dengue due to global warming, deforestation, and other factors.

GIDEON – the Global Infectious Diseases Epidemiology Online Network – is a comprehensive database of infectious diseases and a proud partner for epidemiology research worldwide.

According to Alisa, “We appreciate the great work GIDEON does in collecting data globally. We found the new GIDEON interface very useful.”

GIDEON's comprehensive database supported over 500 research publications so far



GIDEON Advantages

✓ In-depth analysis of global disease spread

GIDEON's database contains 120,000+ prevalence and seroprevalence surveys, 26,000+ country-specific notes and provides information on over **32,000 historical outbreaks and cross-border events.**

✓ REST API with R wrapper for streamlined data modeling

GIDEON API is designed to help researchers retrieve data programmatically, especially useful when working with data modeling. Epidemiologists can easily query the database **using a familiar R environment.**

✓ Millions of quality data points, covering 235 countries and territories

GIDEON pinpoints endemic diseases relevant to each country. All data is spatially and temporally resolved, **with lat/long coordinates of outbreaks available via the API.**

✓ Interactive maps

GIDEON renders interactive maps of vaccine coverage, disease distribution and outbreaks - **there is one for every disease.**

✓ Updated daily by a team of experts

GIDEON is curated by a team of highly regarded medical scientists who are **updating the database daily.**