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UC San Diego

UC San Diego News Center

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UC San Diego Joins IBM World Community Grid's Search for Zika Treatment

Drug discovery scientist teams up with crowdsourced research project

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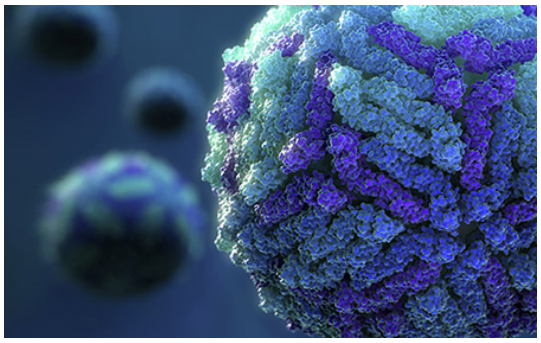

Illustration of the Zika virus structure. Image copyright John Liebler, ArtoftheCell. All rights reserved. Used by permission.

World Community Grid provides massive amounts of supercomputing power to scientists, free of charge. It does this by harnessing the unused computing power of volunteers' computers and Android devices.

For the OpenZika project, World Community Grid powers virtual experiments on chemical compounds that could form the basis of antiviral drugs to treat the virus, which has been linked to serious neurological disorders. The project will screen more than 20 million compounds from existing databases against models of Zika protein structures with dramatically more speed than in a traditional lab.

Anyone with a computer or Android device is invited to join the OpenZika project as a “citizen scientist.” Volunteers don’t need to provide time, expertise or money to help — they simply run an app on their devices that automatically performs virtual experiments for scientists whenever their machines are idle.

Jair Siqueira-Neto, PhD, will test potential new drugs to treat Zika infection, as part of OpenZIka.

Once the computer modeling phase of the project identifies a few promising candidate drugs, Jair Siqueira-Neto, PhD, assistant professor in the Skaggs School of Pharmacy, will use leading-edge robotic equipment to rapidly test them against real-world Zika virus.

“The best part of this project is that it’s truly ‘open’ — we will share all of the data we gather with the research community and general public, further accelerating Zika virus research,” Siqueira-Neto said. “What’s more, researchers not already participating in OpenZika are invited to submit proposals to receive free computing power to support additional Zika projects.”

OpenZika is led by the Federal University of Goias in Brazil, with support from Oswaldo Cruz Foundation (Fiocruz).

About World Community Grid

More than three million computers and mobile devices used by nearly 750,000 people and 470 institutions across 80 countries have already contributed virtual supercomputing power for more than 24 vitally important projects on World Community Grid over the last 11 years, at a value of more than $500 million. Through this crowdsourced approach, World Community Grid has helped researchers identify new potential treatments for childhood cancers, new materials for more efficient solar cells, and new nanotechnology that can filter water more efficiently.

MEDIA CONTACT

Heather Buschman, 858-249-0456, hbuschman@ucsd.edu