

## GeMInA Genomic Metadata Database for Geospatial Pathogen Surveillance Developed at Institute for Genome Sciences

**Baltimore, Maryland**

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*(Nucleic Acids Research)* Scientists at the Institute for Genome Sciences (IGS) at the University of Maryland School of Medicine (UMSOM) published their research about GeMInA, an open system for identifying and organizing outbreak metadata for the breadth of NIAID category A-C viral and bacterial pathogens.

Their summary of the GeMInA project, published in *Nucleic Acids Research* (NAR) on its website as an advanced online publication and to be published in NAR's January Database Issue, describes how the GeMInA web interface provides metadata selection for each pathogen to retrieve a pathogen's host, disease and outbreak information. Integrating this data with a geospatial surveillance system allows researchers to connect pathogens, pathogen products and diseases centered on the taxonomic identification of the pathogen. This integration then allows researchers to identify the extent of outbreak locations and to identify unique genomic regions with the DNA Signature Insignia Detection Tool at the University of Maryland, College Park.

"Gemina is a specialized open source ontological-based system that allows scientists to facilitate the connection between genomic data, infectious diseases and pathogens, and their geospatial location," said Lynn M. Schriml, PhD, senior author of the report and an bioinformatics investigator at the Institute for Genome Sciences, and Assistant Professor, Epidemiology and Preventive Medicine at the University of Maryland School of Medicine.

For information about Gemina, see <http://gemina.igs.umaryland.edu>. For information about the article, see *Nucleic Acids Research*, doi:10.1093/nar/gkp832.

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### About IGS

The Institute for Genome Sciences (IGS) at the University of Maryland School of Medicine is an international research center dedicated to advancing the use of genomics to improve healthcare. Led by Dr. Claire Fraser-Liggett, a preeminent genome scientist and microbiologist, IGS is located in a 10-acre BioPark in downtown Baltimore. IGS scientists are pioneers in the expanding fields of genomics, bioinformatics and metagenomics. Their collaborations with clinicians to integrate genomic analysis into the wider context of human health and disease, are improving 21<sup>st</sup> Century medicine and biological research. For more information, see [www.igs.umaryland.edu](http://www.igs.umaryland.edu).