

for Streptococcus pneumoniae

One-stop platform for pneumococcal genomics: from analyses to visualisation

Stephanie W Lo¹, Richard Goater², Rebecca A Gladstone³, Anthony Underwood², Ben Taylor², Corin Yeats², John Lees⁴, Nicholas Croucher⁵, Benjamin Jeffrey⁵, David Aanensen², Robert F Breiman^{6,7}, Lesley McGee⁸, Stephen D Bentley¹, The Global Pneumococcal Sequencing project consortium⁹

¹Parasites and Microbes, Wellcome Sanger Institute, Hinxton, UK ²The Centre for Genomic Pathogen Surveillance, Wellcome Genome Campus, Hinxton, UK ³Faculty of Medicine, University of Oslo, Oslo, Norway ⁴Department of Microbiology, New York University School of Medicine, New York, USA ⁵School of Public Health, Faculty of Medicine, Imperial College London, London, UK ⁶Rollins School Public Health, Emory University, Atlanta, USA ⁷Emory Global Health Institute, Emory University, Atlanta, USA ⁸Centers for Disease Control and Prevention, Atlanta, USA ⁹https://www.pneumogen.net/gps/

We have tailored the web application Pathogenwatch to offer in silico detection and characterisation of whole-genome sequence (WGS) data from Streptococcus pneumoniae.

(A) Drag and drop assemblies/raw sequence data to obtain the following output and manage them through your personal account. Uploaded data are kept private by default and metadata can be integrated without upload.

Pathogenwatch's core features:

- Assembly quality metric
- Species prediction
- MLST
- Antimicrobial resistance determinant detection

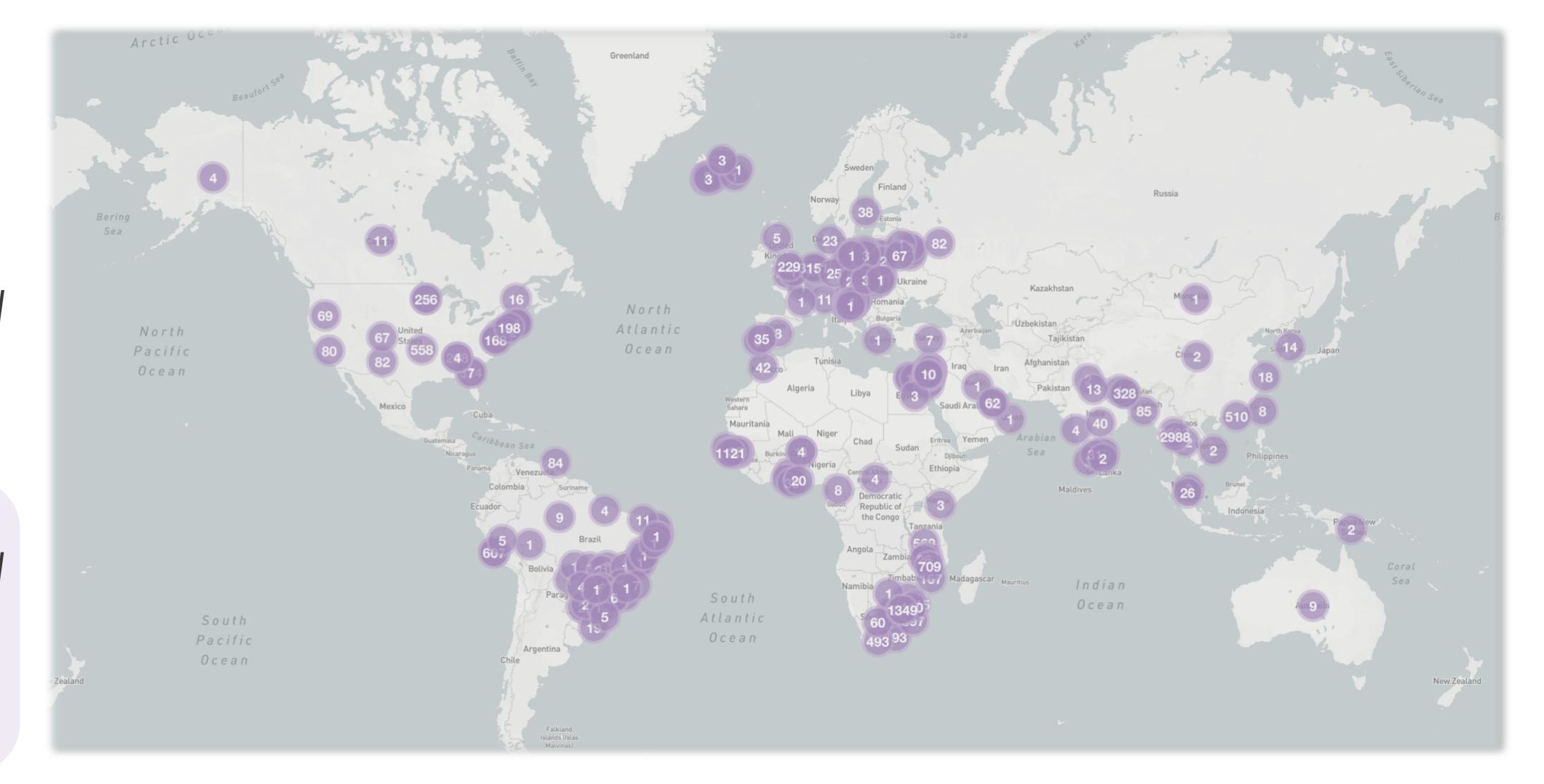
Pneumococcus-specific features:

- Global pneumococcal Sequencing Cluster (GPSC) using PopPUNK
- In silico serotype using SeroBA

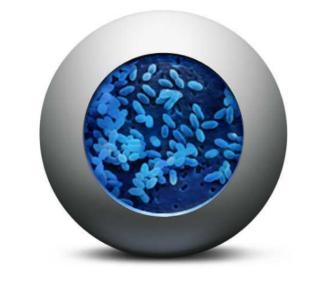
(B) Access and download publicly available >20,000 pneumococcal genomes, including ~13,000 generated from the Global Pneumococcal Sequencing (GPS) project.



A step-by-step tutorial video on the GPS website



Pneumo Pathogenwatch is brought to you by



The Global Pneumococcal Sequencing Project

A worldwide genomic survey of the impact of vaccination on the pathogen population

Centre for Genomic Pathogen Surveillance

Funded by











