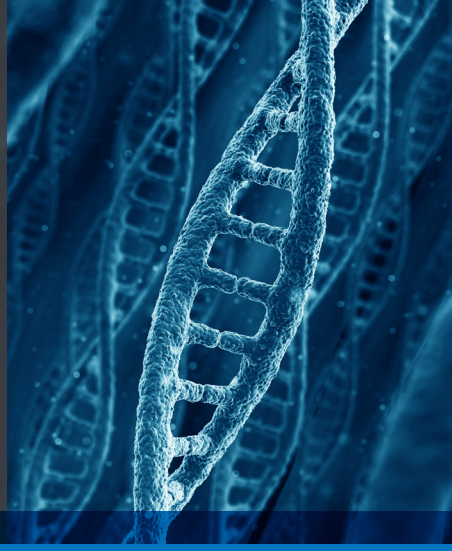
Battelle **CRITERIOME**™

BIO-SEQUENCE CHARACTERIZATION SOFTWARE



BATTELLE CRITERIOME RAPIDLY REPORTS ON DRUG RESISTANCE ENABLED BY GENETIC ELEMENTS

CHALLENGE

Identifying drug resistance of microbial pathogens is critical to productive analysis of infectious disease in biosurveillance applications. Current diagnostic methods rely on culturing microbes, antibody-based assays and other methods, which can be time-consuming and inaccurate due to assay limitations.

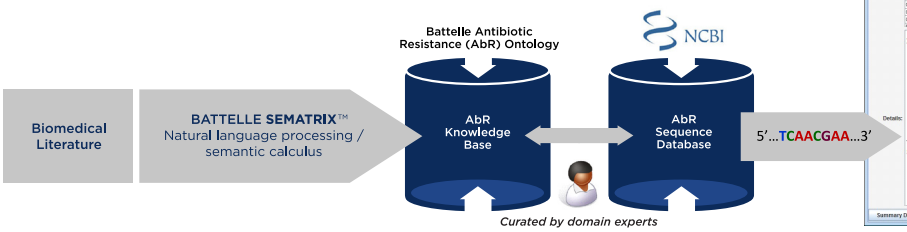
SOLUTION

Battelle's proprietary software, Criteriome, analyzes genomic sequence data to rapidly and accurately identify microbes and to predict potential drug susceptibility/resistance profiles. Our approach uses characteristics of the entire genome to ascertain bacterial identity along with a proprietary database to determine the spectrum of antibiotic resistance harbored within bacterial genomes. Battelle's database includes more than 250,000 genetic elements from more than 200 genera of bacteria which includes most major types of clinically-relevant drug resistance. Our assertions regarding antibiotic resistance elements are backed by over 1000 citations from the professional literature in our proprietary knowledgebase. Systematic interrogation of these resources with custom software allows identification of the complement of antibiotic resistance genes.

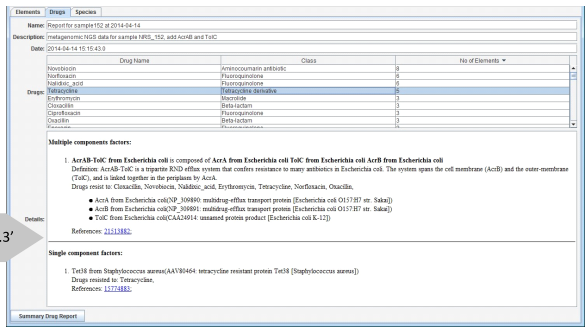
Key benefits

- BATTELLE **CRITERIOME** is flexible with data input
  - Imports data from FastA or FastQ files
  - Easily adapted to any sequence data format and analysis workflow
- BATTELLE **CRITERIOME** provides drug resistance data
  - Rapidly reports on drug resistance enabled by genetic elements
  - Extensive knowledge base with >200,000 microbial sequences linked to scientific publications; edited by in-house SMEs.
- BATTELLE **CRITERIOME** speeds end results
  - ONE DAY vs. 2-3 weeks with traditional analysis

Battelle's process melds automatic extraction of terms and relationships from the professional literature with expert-guided editing and selection to produce a high quality dataset used to recognize antibiotic resistance elements from genomic data. (Sematrix is Battelle's proprietary tool which leverages natural language processing to rapidly process published literature.)

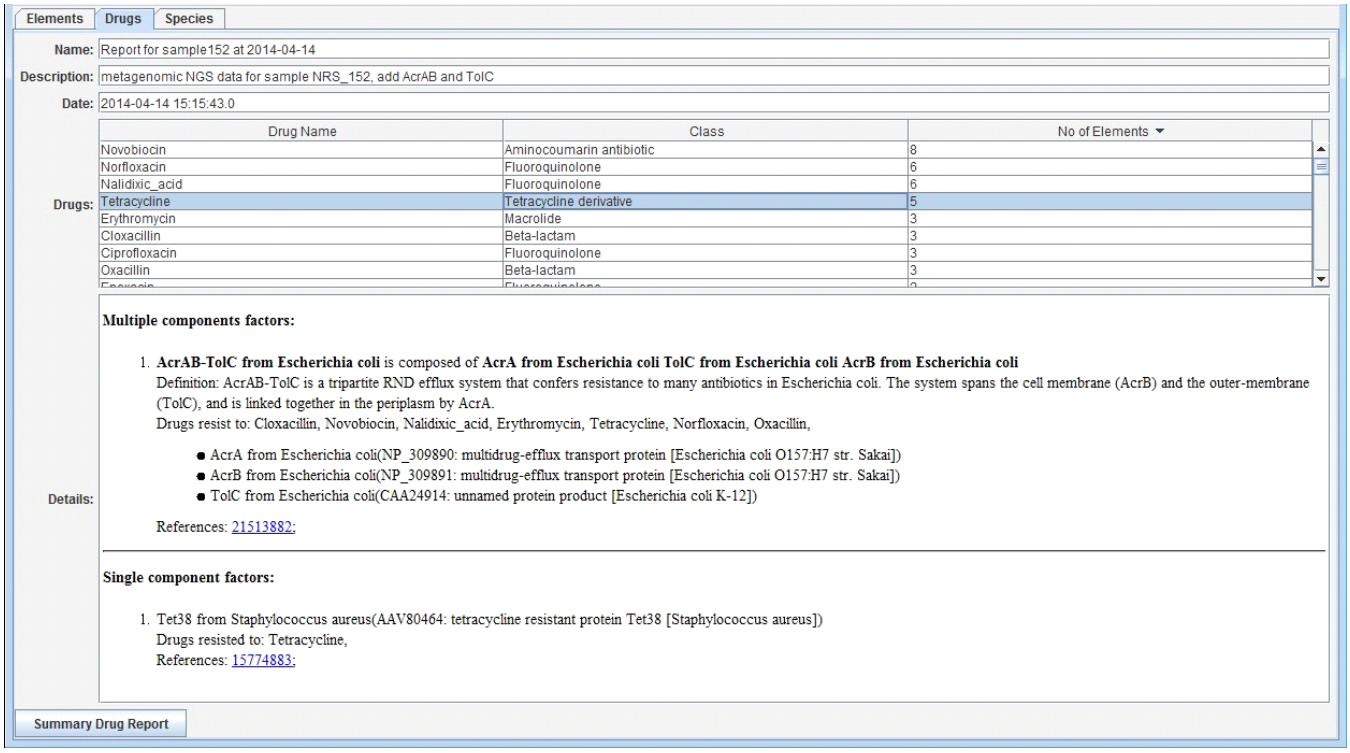


Battelle **Criteriome**. See reverse side for full screen image.



BATTELLE

Battelle Criteriome rapidly reports on drug resistance, enabled by genetic elements.



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