



## OpGen Data Predicting Antibiotic Resistance Published in Antimicrobial Agents and Chemotherapy Journal

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### Pivotal data supports use of Acuitas Lighthouse® Software for prediction of antibiotic resistance

GAITHERSBURG, Md., March 28, 2019 (GLOBE NEWSWIRE) -- OpGen, Inc. (Nasdaq: OPGN) announced today that data supporting prediction of antibiotic resistance using the company's Acuitas® AMR Gene Panel and Acuitas Lighthouse Software was published in the April issue of [Antimicrobial Agents and Chemotherapy](#), a peer-reviewed scientific journal from the American Society for Microbiology. The manuscript titled "Predicting Antibiotic Resistance in Gram-Negative Bacilli from Resistance Genes" was authored by a team of OpGen researchers, led by Dr. Terry Walker, Sr. VP, Research & Development.

The manuscript highlights results from a rapid, high-throughput PCR test that evaluated more than 7,500 highly antibiotic-resistant clinical isolates of *Escherichia coli*, *Klebsiella pneumoniae*, *Proteus mirabilis*, and *Pseudomonas aeruginosa* selected from Merck's Study for Monitoring Antimicrobial Resistance Trends (SMART) surveillance network to predict phenotypic resistance to several antibiotic classes.

The study developed statistical methods to predict phenotypic resistance from resistance genes for various combinations of the four bacterial species and the antibiotics gentamicin, tobramycin, ciprofloxacin, levofloxacin, trimethoprim-sulfamethoxazole, ertapenem, imipenem, cefazolin, cefepime, cefotaxime, ceftazidime, ceftriaxone, ampicillin, piperacillin and aztreonam. Average positive predictive values for predicting phenotypic resistance were 91% for *E. coli*, 93% for *K. pneumoniae*, 87% for *P. mirabilis*, and 92% for *P. aeruginosa*.

Dr. Walker noted, "We believe this study is the most comprehensive of its kind completed to date. The results support the use of rapid DNA testing to help guide antibiotic decision making. The study evaluated approximately two million data points from patients globally and in the United States. Forty-one proprietary prediction algorithms based on the study results have been coded into the Acuitas Lighthouse Software for use in OpGen's planned diagnostic product offerings." Dr. Walker continued, "We are close to making our first FDA submission for the Acuitas AMR Gene Panel (Isolates) test and we are working to successfully complete FDA submissions for use of the AMR Gene Panel and the Acuitas Lighthouse Software for detection and management of urinary tract infections in under three hours. These products are currently available for Research Use Only."

Representatives of Intermountain Medical Center, University of Utah, Merck, and IHMA, Inc. were also part of the research team. For more information on *Antimicrobial Agents and Chemotherapy*, or to access the latest issue, please [click here](#).

### About OpGen

OpGen, Inc. is a precision medicine company harnessing the power of molecular diagnostics and informatics to help combat infectious disease. We are developing molecular information products and services for global healthcare settings, helping to guide clinicians with more rapid and actionable information about life threatening infections, improve patient outcomes, and decrease the spread of infections caused by multidrug-resistant microorganisms, or MDROs.

Our molecular diagnostics and informatics products, product candidates and services combine our Acuitas® molecular diagnostics and Acuitas Lighthouse® informatics platform for use with our proprietary, curated MDRO knowledgebase. We are working to deliver our products and services, some in development, to a global network of customers and partners. The Acuitas AMR Gene Panel (RUO) is intended for Research Use Only and is not for use in diagnostic procedures. The Acuitas Lighthouse Software is not distributed commercially for antibiotic resistance prediction and is not for use in diagnostic procedures. For more information, please visit [www.opgen.com](http://www.opgen.com).

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