



Data Show “Super Bug” Surveillance System Based on OpGen’s Acuitas(R) Resistome Test Can Identify Potential Outbreaks in Hospitals and Improve Infection Control

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Researchers From Rush University Medical Center Present Data at IDWeek 2015

GAITHERSBURG, Md., Oct. 12, 2015 (GLOBE NEWSWIRE) -- [OpGen, Inc.](#) (NASDAQ:OPGN), an early-stage commercial molecular testing and bioinformatics company, today announced that new data from a study with its Acuitas® Resistome Test were presented on October 10 as an oral abstract at IDWeek 2015 by Michael Lin, M.D., M.P.H., an infectious disease physician and assistant professor of medicine at Rush University Medical Center in Chicago. The conference was held October 7 to 11 in San Diego. Dr. Lin and fellow researchers demonstrated how an Acuitas Resistome-based surveillance system can identify potential outbreaks to improve infection control, underscoring the need for healthcare facilities to implement use of molecular-based surveillance systems to detect potential outbreaks that may be caused by multidrug-resistant organisms (MDROs). The research was conducted under the support of the CDC Prevention Epicenters Program and affiliated with the REALM project, a multi-hospital voluntary surveillance network for monitoring multidrug-resistant organisms among Chicago hospital intensive care units and long-term acute care hospitals.

“Since KPC-producing *Enterobacteriaceae* can carry multiple beta-lactamase genes, beta-lactamase resistome types can be markers indicating how strains are related, and detect a potential outbreak,” said Dr. Lin. “Resistant bacteria typically affect the sickest patients, and accurate and early surveillance data is a key part of our efforts in the Chicago area to successfully manage infections and prevent outbreaks.”

In the study, investigators used OpGen’s test to analyze 363 KPC-producing *Enterobacteriaceae* culture isolates recovered from 77 distinct hospital-point prevalence rectal culture surveys in the Chicago region from 2010 to 2014. The test discriminated two dominant types in the region and elucidated the facility clustering of minority types, suggesting its utility as an effective infection-control tool.

“The research results from this study with the REALM project and those from our other Acuitas MDRO Gene Test studies presented as posters at IDWeek 2015 show how important it is for hospitals, healthcare systems and public health agencies to develop ways to quickly and accurately detect MDROs using comprehensive genetic analysis and bioinformatics,” said Kevin Krenitsky, M.D., OpGen President. “We are excited that our data demonstrate how the Acuitas suite of products can fit into programs aimed at improving the ability to rapidly identify MDRO threats, prevent outbreaks, and reduce the incidence of antibiotic resistant infections. These results provide important support to our sales team as we work to cross sell these products into our existing QuickFISH™ customer accounts.”

Details for all OpGen posters presented at the conference follow:

Oral Abstract session: Epidemiology of Resistant Gram Negative Infections. Poster 1378: Using the Acuitas Resistome Test, Michael Lin, M.D., M.P.H. of Rush University Medical Center in Chicago and colleagues studied 363 KPC-producing *Enterobacteriaceae* from 77 point prevalence surveys as part of a Centers for Disease Control & Prevention (CDC) program, and found two dominant resistome types and resistome-type clusters that illustrated the usefulness of developing resistome-based surveillance to identify potential outbreaks.

Poster: Results from a Carbapenem-Resistant Enterobacteriaceae (CRE) Point Prevalence Study Conducted at a University Hospital. Poster Session 1783: Forest Arnold, D.O., M.Sc. of the University of Louisville and colleagues tested 214 peri-anal swabs with the Acuitas MDRO Tests and discovered three CRE identified by their resistant genes and two more non-CRE but potentially carbapenem resistant organisms. Data suggested the need for surveillance at admission and institution of contact isolation to prevent spread of resistant bacteria among hospitalized patients.

Poster: Fecal Carriage of Genes Associated with Gram-Negative Multi-Drug Resistant Organisms. Poster Session 1814: Sandra Richter, M.D. of the Cleveland Clinic and colleagues tested 200 stool samples (16% positive for *C. difficile*) with the Acuitas MDRO Gene Test. Colonization with OXA, VIM, KPC and CTX-M genes were observed in 1%, 3%, 5% and 6% of inpatients, respectively. Multidrug-resistant Gram-negative infections were documented in the medical record at variable time intervals before and/or after sample collection for 52% of patients colonized with Gram-negative resistance genes.

About MDROs

Multidrug-resistant organisms (MDROs) are common bacteria that have developed resistance to multiple classes of antibiotics. They are a leading cause of hospital-acquired infections and are associated with an increase in morbidity and mortality. Each year, more than two million Americans acquire infections that are resistant to antibiotics and of those, 23,000 will die of those infections. Asymptomatic carriers are at a higher risk of an MDRO infection and become reservoirs for transmission to other patients in health care systems if not accurately identified early. Since there are many types of antibiotic resistant organisms, and the way they cause disease is dictated by their genetics, knowing the exact genetic profile of these organisms is a key step to preventing their ability to infect.

About OpGen

OpGen, Inc. is an early commercial-stage molecular testing and bioinformatics company focused on assisting healthcare providers to combat multidrug-resistant organism (MDRO) bacterial infections – “Superbugs.” The Company is addressing this growing public health threat by rapidly delivering precise, actionable information to help identify, combat, and prevent the spread of these complex infections that jeopardize the safety of our hospitals and other long-term care facilities. OpGen offers a full portfolio of Acuitas® products including the MDRO Gene Test, the Resistome Test, microbial Whole Genome Sequence Analysis, Acuitas Lighthouse™ MDRO Management System and QuickFISH™, a suite of FDA-cleared and CE-marked diagnostics for rapid molecular testing of positive blood cultures designed to assure appropriate antibiotic therapy. Learn more at www.opgen.com

OpGen Forward-Looking Statements

This press release includes statements relating to the company's products and services. These statements and other statements regarding our future plans and goals constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, and are intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. Such statements are subject to risks and uncertainties that are often difficult to predict, are beyond our control, and which may cause results to differ materially from expectations. Factors that could cause our results to differ materially from those described include, but are not limited to, the rate of adoption of our products and services by hospitals, the success of our commercialization efforts, the effect on our business of existing and new regulatory requirements, and other economic and competitive factors. For a discussion of the most significant risks and uncertainties associated with OpGen's business, please review our filings with the Securities and Exchange Commission (SEC). You are cautioned not to place undue reliance on these forward-looking statements, which are based on our expectations as of the date of this press release and speak only as of the date of this press release. We undertake no obligation to publicly update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

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