



OpGen Group Company Ares Genetics Presents at AWS and Twist Bioscience Webinars

June 9, 2021

ROCKVILLE, Md., June 09, 2021 (GLOBE NEWSWIRE) -- [OpGen, Inc.](#) (Nasdaq: OPGN, "OpGen"), a precision medicine company harnessing the power of molecular diagnostics and informatics to help combat infectious disease, today announced that its subsidiary [Ares Genetics](#), which strives to become a leader in bacterial genomics and the AI-powered prediction of antimicrobial resistance (AMR), is developing a culture-free, genomic assay for comprehensive AMR surveillance. Dr. Johannes Weinberger, NGS Laboratory Director at Ares Genetics, offered insights into the ongoing assay development activities during a virtual conference [presentation](#) on May 26, 2021 sponsored by Twist Bioscience.

The Ares universal pathogenome assay (ARESupa) addresses important shortcomings of methods like PCR and metagenomics sequencing for microbial identification and detection of AMR markers. PCR-based tests, while accurate and fast, can only test for a small percentage of known pathogen genomes and resistance markers. While metagenomic sequencing, an emerging method for detecting a wide range of pathogen genomes, is suitable for pathogen identification, the method currently often fails to sensitively and reproducibly detect individual resistance genes or the small genome fragments indicative of AMR.

To overcome these limitations, scientists at Ares Genetics have mined ARESdb, which we believe to be an industry-leading proprietary database of genetic markers for AMR, to design a comprehensive target-enrichment next generation sequencing (NGS) panel encompassing more than 8,000 markers.

The results of a successfully completed internal study presented by Dr. Weinberger confirm the potential advantages of this approach: "When compared to metagenomic sequencing, the Ares universal pathogenome assay is proving to be more sensitive, detecting up to five times more markers for AMR. The sensitivity for AMR marker detection in native urine samples from septic patients with confirmed mono-infections in our study was determined to be between 94% and 100% when compared to comparator data obtained from whole genome sequencing of the corresponding bacterial isolate."

Preliminary data on environmental samples confirm reproducibility down to DNA concentrations in the picogram range, demonstrating the potential suitability of this assay for the surveillance of antimicrobial resistance.

Proof of concept experiments performed in native septic urine samples suggest that data generated by using this assay are also compatible with Ares' proprietary AI-powered bioinformatics for predictive antibiotic susceptibility testing (pAST), showing an average 92% concordance to culture and AST for *E.coli* and 10 tested compounds.

On May 27, 2021, Dr. Arne Materna, CEO of Ares Genetics mentioned in an invited [Genomics-Track presentation](#) at the Amazon Web Services (AWS) healthcare and life sciences virtual symposium that the Ares universal pathogenome assay (ARESupa), is currently being evaluated in a paid-for early access program for which the company has already signed up five public health organizations from different European countries.

In his presentation illustrating the benefits of machine learning for the prognostic detection of AMR, Dr. Materna confirmed that "the Ares universal pathogenome assay is part of a focused effort by Ares Genetics to commercialize solutions for pathogen and AMR surveillance from isolates and native specimen with launches having already begun and several additional ones expected during 2021."

About OpGen, Inc.

OpGen, Inc. (Gaithersburg, MD, USA) is a precision medicine company harnessing the power of molecular diagnostics and bioinformatics to help combat infectious disease. Along with subsidiaries, Curetis GmbH and Ares Genetics GmbH, we are developing and commercializing molecular microbiology solutions helping to guide clinicians with more rapid and actionable information about life threatening infections to improve patient outcomes, and decrease the spread of infections caused by multidrug-resistant microorganisms, or MDROs. OpGen's product portfolio includes Unyvero[®], Acuitas[®] AMR Gene Panel and Acuitas[®] Lighthouse, and the ARES Technology Platform including ARESdb[®], using NGS technology and AI-powered bioinformatics solutions for antibiotic response prediction.

For more information, please visit www.opgen.com.

Forward-Looking Statements

This press release includes statements regarding study data, performance characteristics and potential utility of certain of Ares Genetics' assays and services. These statements and other statements regarding OpGen's Unyvero products, their commercialization and launch, 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, our ability to successfully, timely and cost-effectively develop, seek and obtain regulatory clearance for and commercialize our product and services offerings, the rate of adoption of our products and services by hospitals and other healthcare providers, the fact that we may not effectively use proceeds from recent financings, including our November 2020 private placement, February 2021 Registered Direct and March 2021 warrant exercise and exchange, the realization of expected benefits of our business combination transaction with Curetis GmbH, the success of our commercialization efforts, the impact of COVID-19 on the Company's operations, financial results, and commercialization efforts as well as on capital markets and general economic conditions, 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. 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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