



OpGen Subsidiary Ares Genetics GmbH Enters into Collaboration Agreement with the Belgian National Reference Centre for Invasive *S. pneumoniae* at UZ Leuven

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- Collaborators aim to develop and evaluate computation tools, including predictive models for whole genome sequencing-based antibiotic susceptibility testing (wgsAST)
- Ares plans to strategically expand its proprietary AMR knowledgebase ARESdb with data collected during the collaboration
- Ares to deploy the commercial AREScloud web application at UZ Leuven to support pathogen typing, AMR characterization and outbreak analysis

ROCKVILLE, Md., July 26, 2022 (GLOBE NEWSWIRE) -- OpGen, Inc. (Nasdaq: OPGN, "OpGen") announced today that its subsidiary Ares Genetics GmbH (Ares Genetics), which strives to become a leader in bacterial genomics and the Artificial Intelligence (AI)-powered prediction of antimicrobial resistance (AMR), and the Belgian National Reference Centre for invasive *S. pneumoniae* at the Universitair Ziekenhuis Leuven (UZ Leuven) have entered into a collaboration agreement to jointly evaluate computational tools developed by Ares Genetics for the identification and characterization of *Streptococcus pneumoniae* for diagnostic purposes.

AMR is a serious threat to public health. Over five years, the estimated number of annual deaths that might have been prevented by effective antimicrobial therapy has grown by 81% to approximately 1.27 million deaths.^{1,2} Among other AMR pathogens, the U.S. Center of Disease Control has classified drug-resistant *Streptococcus pneumoniae* as a serious antibiotic resistant threat on its website.³

Ares Genetics and UZ Leuven aim to employ machine learning tools for antibiotic susceptibility testing of *Streptococcus pneumoniae* directly from whole genome sequencing data. The AI-based wgsAST technology developed by Ares Genetics⁴ relies on predictive models which are trained on ARESdb, a proprietary AMR knowledgebase and collection of pathogen genome data and associated data on phenotypic antibiotic susceptibility and resistance.

"We are excited to jointly demonstrate and advance the utility of antibiotic susceptibility prediction directly from genome data. AMR in respiratory pathogens, including in Pneumococci, is a serious healthcare threat," said Dr. Arne Materna, CEO of Ares Genetics. "We welcome the collaboration with the experts at UZ Leuven tasked with the national surveillance of *Streptococcus pneumoniae*. Partnerships with national reference and public health laboratories allow us to aggregate current data on AMR in key pathogens, to further enrich our ARESdb, and in turn to deploy an up-to-date AI for wgsAST where it matters."

The collaboration with UZ Leuven follows after another collaboration agreement between Ares Genetics and an unnamed international commercial reference laboratory had been announced in 2021.

Ares Genetics plans to expand ARESdb with data collected at the national reference center, to develop and deploy wgsAST models for *Streptococcus pneumoniae*, and to jointly evaluate their performance compared to conventional methods. In return for access to genome and AMR phenotype data, Ares Genetics will deploy AREScloud at the National Reference Centre for invasive *S. pneumoniae* at UZ Leuven. AREScloud is a commercially available, user-friendly bioinformatics web application for pathogen detection, typing, AMR characterization and outbreak analysis. Unlike other commercial solutions, AREScloud draws on ARESdb to provide rich information on AMR and to offer unique wgsAST capabilities to its users.

About OpGen, Inc.

OpGen, Inc. (Rockville, MD, USA) is a precision medicine company harnessing the power of molecular diagnostics and bioinformatics to help combat infectious disease. Along with our 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 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 OpGen's subsidiary Ares Genetics GmbH's collaboration agreement with the Belgian National Reference Center at UZ Leuven. These statements and other statements regarding OpGen's 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 success of our commercialization efforts, 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, the continued realization of expected benefits of our business combination transaction with Curetis GmbH, the continued impact of COVID-19 on the Company's operations, financial results, and commercialization efforts as well as on capital markets and general economic conditions, our ability to satisfy debt obligations under our loan with the European Investment Bank, the effect of the military action in Russia and Ukraine on our distributors, collaborators and service providers, our liquidity and working capital requirements, 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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¹ [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)02724-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)02724-0/fulltext)

² <https://amr-review.org/sites/default/files>

[/AMR%20Review%20Paper%20-%20Tackling%20a%20crisis%20for%20the%20health%20and%20wealth%20of%20nations_1.pdf](#)

³ <https://www.cdc.gov/drugresistance/biggest-threats.html#pne>

⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7315026/>



Source: OpGen, Inc.