OpGen & Curetis

Combining to build a stronger future

September 04, 2019

FORWARD LOOKING STATEMENTS

OpGen, Inc.

This presentation includes statements relating to the proposed business combination between OpGen and Curetis. These statements and other statements regarding OpGen's and the combined company's future plans 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 OpGen's control, and which may cause results to differ materially from expectations. Factors that could cause results to differ materially from those described include, but are not limited to, our ability to successfully and timely seek approval of, and obtain approval of our stockholders for the transaction, satisfy the closing conditions under the implementation agreement, successfully combine the businesses of OpGen and Curetis, comply with the complexities of a global business, achieve the synergies we expect and successfully implement the combined company's strategic and business goals and objectives. For a discussion of the most significant risks and uncertainties associated with OpGen's business, please review OpGen's filings with the U.S. 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.

FORWARD LOOKING STATEMENTS

Curetis N.V.

This document has been issued by Curetis N.V. (the “Company” and, together with its subsidiaries, the "Group") and does not constitute or form part of and should not be construed as any offer or invitation to sell or issue, or any solicitation of any offer to purchase or subscribe for, any securities of the Company, nor shall any part of it nor the fact of its distribution form part of or be relied on in connection with any contract or investment decision, nor does it constitute a recommendation regarding the securities of the Company or any present or future member of the Group.

In particular, this document is not an offer of securities for sale in the United States of America. Securities may not be offered or sold in the United States of America absent registration or an exemption from registration under the U.S. Securities Act of 1933, as amended. Neither this document nor any copy of it may be taken or transmitted into the United States of America, its territories or possessions or distributed, directly or indirectly, in the United States of America, its territories or possessions.

All information contained herein has been carefully prepared. However, no reliance may be placed for any purposes whatsoever on the information contained in this document or on its completeness. No representation or warranty, express or implied, is given by or on behalf of the Company or any of its directors, officers or employees or any other person as to the accuracy or completeness of the information or opinions contained in this document and no liability whatsoever is accepted by the Company or any of its directors, officers or employees nor any other person for any loss howsoever arising, directly or indirectly, from any use of such information or opinions or otherwise arising in connection therewith.

Where third-party information has been used in this document, the source of this information has been identified. The information in this document that has been sourced from third parties has been accurately reproduced and, as far as the Company is aware and able to ascertain from the information published by that third party, the reproduced information is correct. However, the Company has not verified the reproduced information and does not guarantee nor bear or assume responsibility for the accuracy and completeness of the information from third-party sources presented in this document.

The information contained in this presentation is subject to amendment, revision and updating. Certain statements, beliefs and opinions in this document are forward-looking, which reflect the Company’s or, as appropriate, senior management’s current expectations and projections about future events. By their nature, forward-looking statements involve a number of risks, uncertainties and assumptions that could cause actual results or events to differ materially from those expressed or implied by the forward-looking statements. These risks, uncertainties and assumptions could adversely affect the outcome and financial effects of the plans and events described herein. Statements contained in this document regarding past trends or activities should not be taken as a representation that such trends or activities will continue in the future. The Company does not undertake any obligation to update or revise any information contained in this presentation (including forward-looking statements), whether as a result of new information, future events or otherwise. You should not place undue reliance on forward-looking statements, which speak only as of the date of this document.

By attending, reviewing or consulting the presentation to which this document relates or by accepting this document you will be taken to have represented, warranted and undertaken that you have read and agree to comply with the contents of this notice.

COMBINING TO BUILD A STRONGER FUTURE

Strategic Rationale

- Establish a leading antimicrobial resistance (AMR) precision medicine business
- Broad portfolio of high impact rapid diagnostics and best-in-class AMR bioinformatics
- Leverage combined sales, distribution, bioinformatics and operating infrastructure

Structure of Transaction

- OpGen acquisition of Curetis GmbH for 2.66 million new shares of OpGen common stock

Financial Considerations

- Combined company positioned for strong growth profile and sustained value creation
- Estimated 2020 combined revenue of $10-15 million,
  up from an anticipated $5-6 million in 2019
- Targeting to significantly reduce net loss starting in 2020

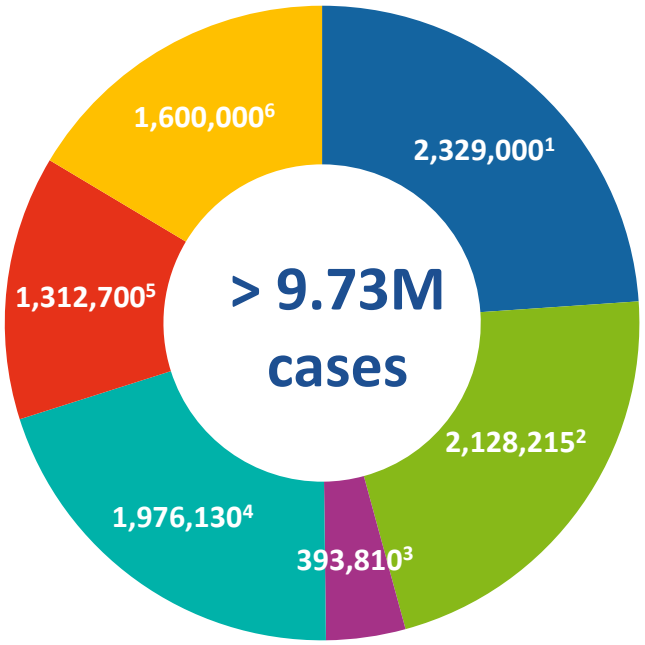
OpGen® curetis

STRATEGIC BENEFITS

- Market leader positioned to capitalize on global opportunities in infectious disease and rapid AMR detection
- Proprietary molecular diagnostic tests and platforms
- Premier AI-powered bioinformatics solutions for multi-drug resistance diagnostics
- Global commercial channel capabilities & partners
- Financial leverage, operational synergies, and positive growth-driven business outlook

COMBINED COMPANY ADDRESSES MULTIPLE HIGH IMPACT UNMET CLINICAL NEEDS AND LARGE AVAILABLE MARKET OPPORTUNITIES

U.S. and European market with high unmet medical need addressable through hospital-focused sales channels



- Pneumonia (HPN/LRT)
- Implant and Tissue Infections (ITI)
- Blood Culture (BCU)
- Intra-Abdominal Infections (IAI)
- Sepsis Host Response (SHR)
- Urinary Tract Infections (UTI)

[1] CDC (2010); ECDC (2008); Chalmers et al. (2014)

[2] Margolis et al. (2011); American Diabetes Association (2014); Diabetes Deutschland (2012); Richard et al. (2011); Livesly and Chow (2002); Dorner et al. (2009); Deutsche Gesellschaft für Verbrennungsmedizin (2014); Mayhall (2003); Klevens et al. (2007) in Jhung (2009); Geffers (2001); Brun-Buisson (2011); Michelotti et al. (2012); Sunderlin (2006)

[3] Martin (2012); Statista (2015); Dellinger et al. (2013)

[4] HCUP (2013); CDC (2010)

[5] Martin (2012); Statista (2015)

[6] ECDC (2013), Klevens et al. (2002)

The current portfolio and pipeline of cartridges target almost 10 million patients annually in EU and U.S. with additional upside in Asia / Pacific and ROW markets

OpGen curetis

COMBINED COMPANY'S PORTFOLIO OF COMMERCIAL STAGE PRODUCTS & STRATEGIC RELATIONSHIPS

Unyvero Platform & Tests

Unyvero FDA-cleared platform and lower respiratory tract infection (LRT) test

Acuitas Tests

Acuitas tests in development and pending FDA clearance to improve antibiotic decision making

Acuitas® AMR Gene Panel

Acuitas Lighthouse®

Global Commercial Presence

Direct sales in U.S., European distribution with A. Menarini Diagnostics, China distribution with Beijing Clear Biotech

OpGen® curetis

ares genetics

Strategic Fit

Transformative Strategic Relationship in MDx and BioIT

OpGen® curetis

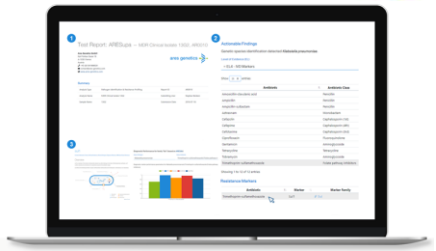
STRATEGIC BENEFITS

- Market leader positioned to capitalize on global opportunities in infectious disease and rapid AMR detection
- Proprietary molecular diagnostic tests and platforms
- Premier AI-powered bioinformatics solutions for multi-drug resistance diagnostics
- Global commercial channel capabilities & partners
- Financial leverage, operational synergies, and positive growth-driven business outlook

SAMPLE-TO-ANSWER AND HIGH-THROUGHPUT TESTING CAPABILITIES

Molecular microbiology leadership through proprietary platforms and content

Striving for Molecular Microbiology Leadership

MDx Platforms	MDx Content
unyvero	Acuitas** AMR Gene Panel Acuitas Lighthouse®
	ares genetics a curetis group company 
Unyvero A50 High-Plex PCR	**AREScb** MDx Content & NGS Applications
	
Unyvero A30 *RQ** Low- to Mid-Plex PCR	
Low- to High-Plex PCR Broad Sample Range	Proprietary PCR & NGS Applications based on Leading AI-Powered AMR Knowledgebases

* Unyvero A30 *RQ* Analyzer in development, latest design concept; final product may differ

**Pending 510(k), not for diagnostic use.

OpGen® curetis

CURRENT AND NEAR-TERM U.S. PRODUCT OFFERINGS

Unyvero Pneumonia (LRT)

Description:
- Sample-to-answer multiplex PCR from native specimen in about 5 hours with ~2min hands-on time
- 36 Pathogen ID, 10 resistance genes

Status:
- FDA-cleared (De Novo 510(k)), launched June ’18

Differentiators:
- Most comprehensive panel specifically tailored to bacterial pneumonia delivering unique clinically actionable insights
- Broadest coverage of carbapenem resistance
- Only molecular pneumonia panel to cover penicillin resistance

Coming Next:
- **Unyvero LRT plus high sensitivity application for BAL samples (510(k) submitted)**
- **Unyvero Invasive Joint Infection (IJI) (partnering discussions ongoing)**

Acuitas AMR Gene Panel

Description:
- Sample-to-answer multiplex PCR from bacterial isolates in <3 hours
- Up to 47 resistance genes, accurate prediction of resistance for 12+ antibiotics
- Available now for Research Use Only (RUO)

Status:
- FDA 510(k) submitted May ‘19

Differentiators:
- Rapid AMR prediction
- CRE infection control

Coming Next:
- **Rapid urine test with sample-to-answer multiplex PCR from native specimen in <3 hours**
- **5 pathogen ID/quantitation, up to 47 resistance genes, and accurate prediction of resistance for 12+ antibiotics**
- **Testing to support FDA *De Novo* submission in progress**

OpGen curetis

UNYVERO A30 *RQ* RAPID SAMPLE-TO-ANSWER TESTING PLATFORM

Platform open for partnering to rapidly create a broad menu of tests

In advanced discussions with first potential partner(s)

Anticipated transactions to include upfront & milestone payments, R&D funding, and royalties

Key Design Features

- Fully integrated, closed, sample-to-answer MDx platform
- Universal real-time PCR technology for low- to mid-plex testing
- Flexible cartridge fluidics for numerous chemistries and assay formats
- Fast turn-around time of 45-90 minutes
- Light-weight, stackable benchtop design with small footprint
- Modular and scalable from 1 to 8 cartridge slots
- Designed for ease-of-use and flexible deployment in labs and near-patient settings
- Attractive COGS for instruments and reagents

Development Status

- First multiplex PCR successfully demonstrated on fully functional prototypes in tech due diligence for potential partners
- Manufacturing aspects fully specified and in development or implementation phase
- Expect to progress development in 2019 for full V&V readiness for licensing partner‘s assays with possible CE-IVD launch in 2020

OpGen curetis

STRATEGIC BENEFITS

- Market leader positioned to capitalize on global opportunities in infectious disease and rapid AMR detection
- Proprietary molecular diagnostic tests and platforms
- Premier AI-powered bioinformatics solutions for multi-drug resistance diagnostics
- Global commercial channel capabilities & partners
- Financial leverage, operational synergies, and positive growth-driven business outlook

OpGen curetis

ARES GENETICS & ARESdb

Bioinformatics subsidiary with globally leading proprietary AI-powered knowledgebase for AMR informing PCR & NGS-based diagnostics

Global ARESdb Database

- Leading Knowledgebase on quantitative Antibiotic Resistance Markers building on **SIEMENS** Microbiology Strain Collection
- Up to > 98% Accuracy for Antibiotic Resistance Detection
- Based on ~40,000 Pathogens and associated Resistance Data for > 100 Antibiotics

Bio-IT AMR agreement with QIAGEN, N.V

Pharma R&D agreement with Sandoz

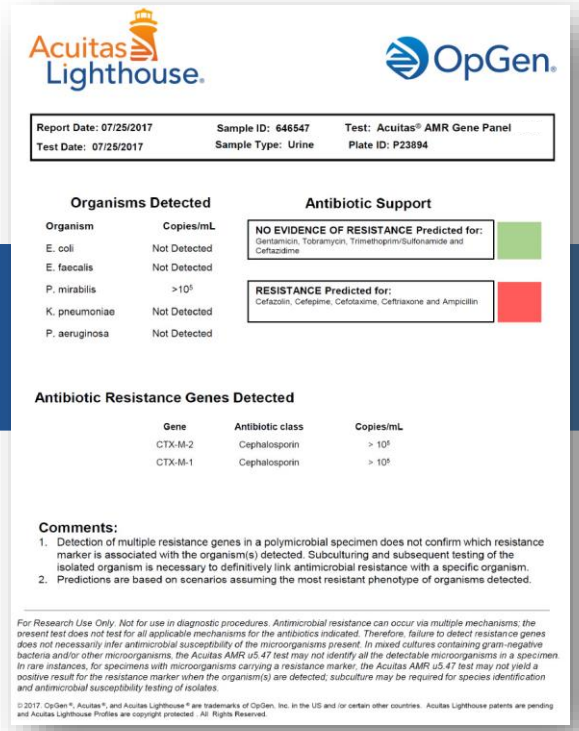
Diagnostics R&D collaboration with global IVD player

NGS Service Laboratory

OpGen curetis

ACUITAS LIGHTHOUSE®: DIAGNOSTICS DATA MANAGEMENT PLATFORM FOR ANTIBIOTIC RESISTANT PATHOGENS†

Rapid molecular antibiotic resistance prediction



Acuitas Lighthouse® OpGen®

Report Date: 07/25/2017 Sample ID: 646547 Test: Acuitas® AMR Gene Panel
Test Date: 07/25/2017 Sample Type: Urine Plate ID: P23894

Organisms Detected

Organism	Copies/mL
E. coli	Not Detected
E. faecalis	Not Detected
P. mirabilis	$>10^5$
K. pneumoniae	Not Detected
P. aeruginosa	Not Detected

Antibiotic Support

NO EVIDENCE OF RESISTANCE Predicted for:
Gentamicin, Tobramycin, Trimethoprim/Sulfonamide and Ceftazidime

RESISTANCE Predicted for:
Cefazolin, Cefepime, Cefotaxime, Ceftriaxone and Ampicillin

Antibiotic Resistance Genes Detected

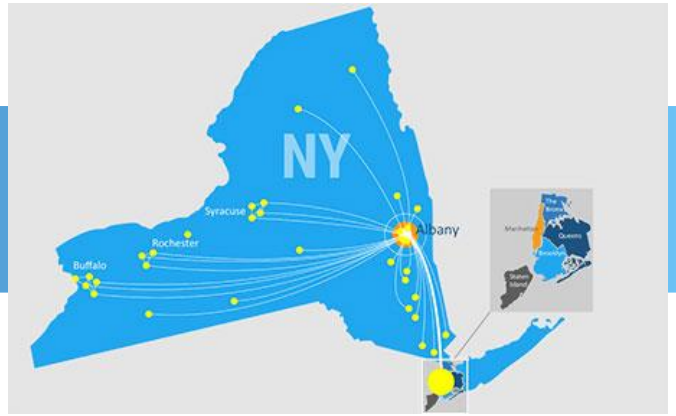
Gene	Antibiotic class	Copies/mL
CTX-M-2	Cephalosporin	$> 10^5$
CTX-M-1	Cephalosporin	$> 10^5$

Comments:

1. Detection of multiple resistance genes in a polymicrobial specimen does not confirm which resistance marker is associated with the organism(s) detected. Subculturing and subsequent testing of the isolated organism is necessary to definitively link antimicrobial resistance with a specific organism.
2. Predictions are based on scenarios assuming the most resistant phenotype of organisms detected.

For Research Use Only. Not for use in diagnostic procedures. Antimicrobial resistance can occur via multiple mechanisms; the present test does not test for all applicable mechanisms for the antibiotics indicated. Therefore, failure to detect resistance genes does not necessarily infer antimicrobial susceptibility of the microorganisms present. In mixed cultures containing gram-negative bacteria and/or other microorganisms, the Acuitas AMR u5.47 test may not identify all the detectable microorganisms in a specimen. In rare instances, for specimens with microorganisms carrying a resistance marker, the Acuitas AMR u5.47 test may not yield a positive result for the resistance marker when the organism(s) are detected; subculture may be required for species identification and antimicrobial susceptibility testing of isolates.

Development contract for potential State-wide AMR surveillance network



Cloud-based bioinformatics platform powers our ability to rapidly generate meaningful results that have the potential to change the landscape of clinical management and improve outcomes for patients

†In development; For Research Use Only. Not for use in diagnostic procedures.

OpGen® curetis

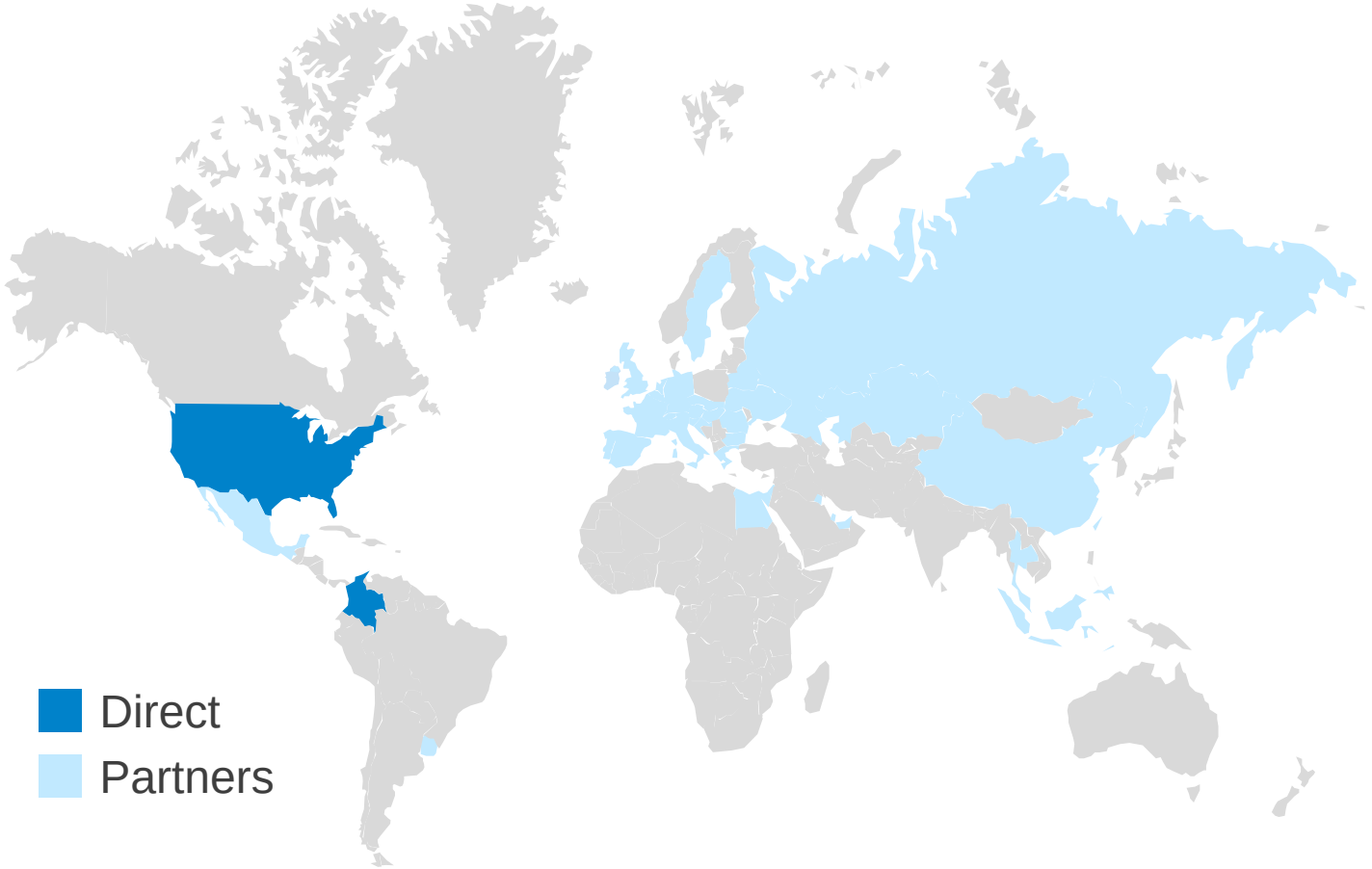
STRATEGIC BENEFITS

- Market leader positioned to capitalize on global opportunities in infectious disease and rapid AMR detection
- Proprietary molecular diagnostic tests and platforms
- Premier AI-powered bioinformatics solutions for multi-drug resistance diagnostics
- Global commercial channel capabilities & partners
- Financial leverage, operational synergies, and positive growth-driven business outlook

COMMERCIAL STRATEGY

OpGen and Curetis to realize synergies from a combined commercial effort

- Multiple products to same hospital call points via same sales channel to drive synergies and cost efficiencies
- Over 200 active customers with additional pipeline of accounts in evaluation phase



Expanding global commercial reach though direct sales in U.S. and global distributors

> Direct sales in the U.S. – combined team of 12

> European distribution through Menarini Diagnostics

> China distribution through Beijing Clear Biotech

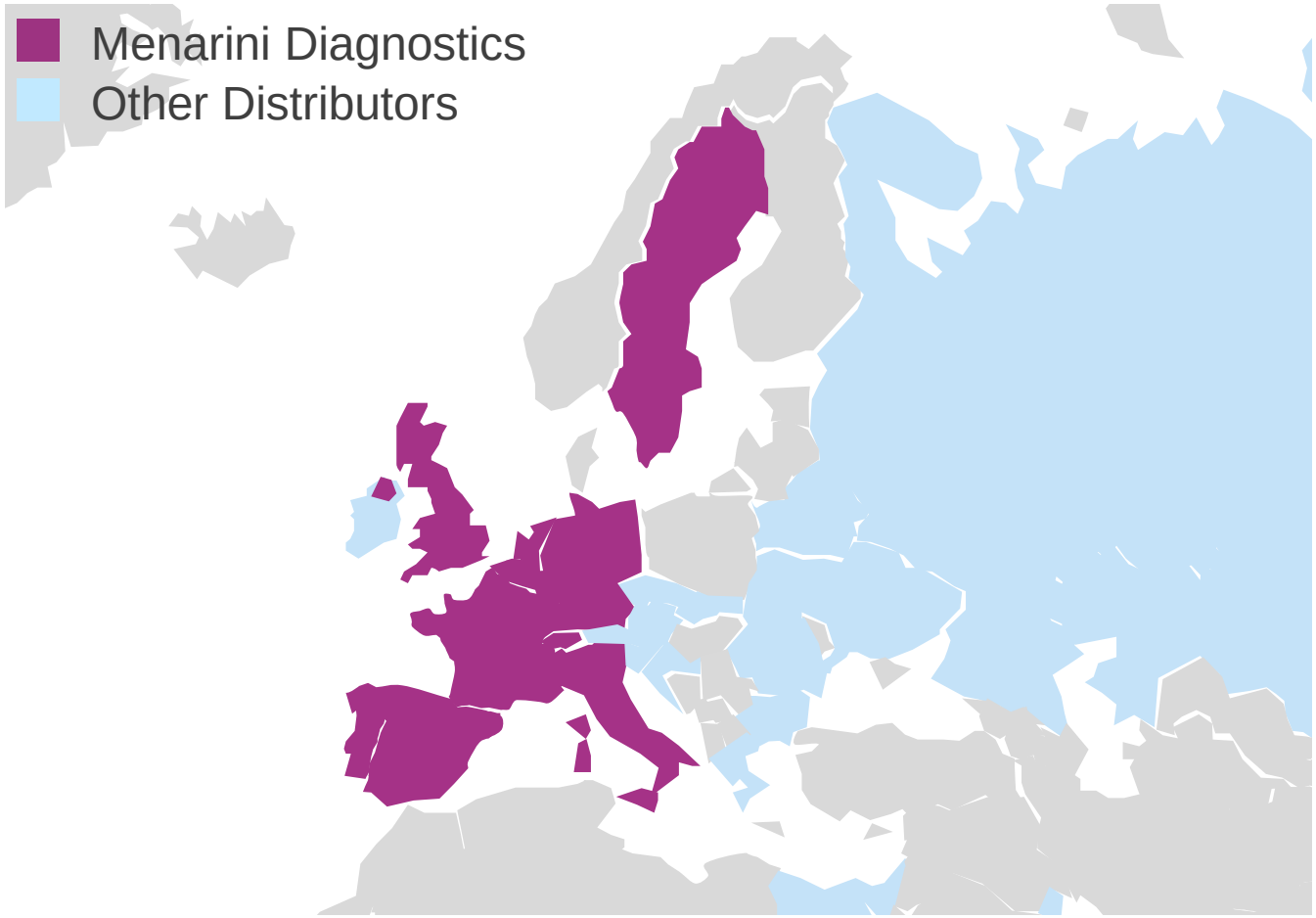
> 17 distributors covering 40 countries in EU, ME, and Asia

> Supported in EU / LatAM by Curetis Commercial ops team of 10

OpGen curetis

PAN-EUROPEAN DISTRIBUTION BY MENARINI DIAGNOSTICS

Starting with 11 EU countries – option to expand relationship to further EMEA markets and additional product lines



Menarini Diagnostics Collaboration (Q1-2019)

> Covers entire Unyvero A50 product line

> Initial countries: **BE, CH, DE ES, FR, IT, LU, NL, PT, SE, UK**

> Option to expand relationship to further EMEA countries – Menarini to take over Greece from end of Jan 2020 onwards

> Launch of collaboration at ECCMID 2019 (Amsterdam, April 13-19, 2019)

A.MENARINI diagnostics

OpGen curetis

STRATEGIC BENEFITS

- Market leader positioned to capitalize on global opportunities in infectious disease and rapid AMR detection
- Proprietary molecular diagnostic tests and platforms
- Premier AI-powered bioinformatics solutions for multi-drug resistance diagnostics
- Global commercial channel capabilities & partners
- Financial leverage, operational synergies, and positive growth-driven business outlook

OpGen curetis

FINANCIAL CONSIDERATIONS

- Combined company positioned for strong growth profile and sustained value creation
  - FY2018 revenues of $1.6 million (Curetis) and $2.9 million (OpGen)
  - Estimated FY2019 combined revenue of $5-6 million
  - Estimated 2020 combined revenue of $10-15 million
- Net loss from operations and cash burn anticipated to decrease starting in 2020 due to operating synergies from combined corporate, manufacturing & distribution, R&D, and sales & marketing organizations
- Approximately 130 employees post-deal closing domestic and international
- Transaction close contingent on completing interim equity financing as well as debt holder and shareholder approvals from both existing companies
- OpGen has committed to raise interim capital of $10 million in 2H 2019

OpGen curetis

COMBINED COMPANY SENIOR MANAGEMENT TEAM

Combined team has decades of experience in precision medicine, molecular diagnostics and capital markets

Chairman of the Board:	William Rhodes
Chief Executive Officer:	Oliver Schacht, Ph.D.
Chief Financial Officer:	Timothy C. Dec

Board Members:

William Rhodes (Chairman)
Evan Jones (Non-executive role)
Oliver Schacht, Ph.D. (CEO)
Two Additional Curetis Appointees
One Additional OpGen Appointee

TRANSACTION TIMELINE

Subject to approval by OpGen's and Curetis' shareholders and debt financing providers

- Both companies' Boards of Directors have approved the implementation agreement
- Both companies will seek approval from their respective shareholders in meetings to be scheduled for the fourth quarter of this year
- Provided shareholders and debt holders for both OpGen and Curetis grant approval, the transaction is expected to be completed in early 2020

Thank You!

OpGen curetis