

DEFEATS BACTERIAL VIRULENCE AND RESTORES ANTIBIOTIC SUSCEPTIBILITY



Market need and potential

Antibiotic resistance is a global threat fully comparable to climate changes. Infections with multidrug resistant bacteria cause around 33 000 deaths annually in the EU alone, and the accompanying economic burden is immense. Without adequate tools to control bacterial infections, modern health care will collapse. Oncological treatments and advanced surgery rendering patients highly susceptible to infections will become difficult or impossible. To mitigate this threat, regulatory bodies offer fast track for novel treatments of bacterial infections and in the US an extra five years market exclusivity for new lifesaving antibacterial drugs.

Business idea

Quretech Bio addresses a significant unmet medical need by developing a new class of antibacterial agents that target antimicrobial resistance either by a direct antimicrobial effect or by potentiating existing antibiotics. The compounds are new small molecules from a well-developed chemical platform with excellent synthetic availability and desirable drug properties.

The company is currently managing three projects that can be divested through sales, out licensing or partnering independent of each other.

- *Healthcare associated infections caused by Gram-positive pathogens including MRSA and VRE*

New chemical entities that can restore sensitivity and boost efficacy of market leading antibiotics such as vancomycin and gentamicin have been developed, and the lead compounds are bactericidal to Gram-positive bacteria at μM concentrations and have demonstrated effects in a difficult-to-treat *in vivo* model.

• Tuberculosis

The lead compounds have the ability to block the development of drug resistance and reverse resistance in *Mycobacterium tuberculosis* to the frontline antibiotic product isoniazid. Restoring the efficacy of isoniazid for multidrug-resistant tuberculosis provides a great advantage as it offers an alternative to the demanding and toxic drugs currently used.

• Chlamydia infections

Highly selective virulence blockers have been developed that can be used to treat chlamydial infections without the use of any additional antibiotics and based on the mode of action there is no selection pressure for resistance development.

Advantages

- Novel family of small molecules with new mode of action
- Bactericidal effect on antibiotic-resistant profiles
- Reduce the likelihood of inherited resistance
- Well tolerated in human cell lines
- Target large and growing markets with high unmet medical needs
- Possible Orphan Drug Designation for MRSA, VRE and Tuberculosis in US

Competition

A recent analysis of the global clinical antibacterial pipeline identified 42 new antibiotics in development. The clinical pipeline is still dominated by derivatives of established classes and new drugs without pre-existing cross-resistance are limited and urgently needed. The fact that Quretech's compounds can boost and maintain the efficacy of current antibiotics, can turn potential competitors into business opportunities.

Current status

The lead asset, GmPcides for Gram-positive bacterial infections, has demonstrated effect both *in vitro* and *in vivo* (in a difficult-to-treat model of catheter-associated urinary tract infection). Candidate drug selection will be performed during Q2 2020.

Contact

Fredrik Almqvist, CEO
+46 70-397 90 97
fredrik.almqvist@quretech.com

Website

www.quretech.com

IPR

Quretech Bio has established a strong IPR portfolio based on separate patent applications for each of the three development programs. The patents are based on the small molecule New Chemical Entities (NCE's) and their use as virulence blockers with or without combination with existing antibiotics.

Capital need

5 MSEK to finance the development of the company for the next 18 months. The proceeds will be used for lead candidate drug selection, hiring a CEO in Q3 2020 and creating a subsidiary focused on the lead program.

Partnership

We are currently seeking contact with private and institutional investors and pharmaceutical partners with an interest in infectious diseases.

Management and Board

Sven Bergström, Chairman of the board
Prof Microbiology, Umeå University

Fredrik Almqvist, CEO
Prof Organic Chemistry, Umeå University

Christina Stallings, Vice Chairman
Ass. Prof Microbiology, Washington University, St Louis

Scott Hultgren, CSO
Prof Microbiology, Washington University, St Louis

Jörgen Johansson, Board member
Prof Microbiology, Umeå University

Annica Rönnbäck, Project coordinator, PhD

Business Advisory Board

Lars Gunneflo, former CEO Pfizer AB (Sverige)

Karin Meyer, CEO Apotekarstiftelsen

Håkan Martinell, CEO Nordiska Centrumhus AB

Background

Quretech Bio's vision is to develop first-line drugs to combat infectious diseases and the occurrence of antibiotic resistance, and to establish as a leading drug discovery company in the field. Quretech Bio was founded in 2010 to commercialize world-leading research from groups based at Umeå University, Sweden, and Washington University, St Louis, MO, USA. Since the foundation, several key persons have joined the company either as board members, researchers, or scientific advisors. Last year Quretech Bio received an institutional investment from Nordiska Centrumhus.