QureTechBio
Defeats bacterial virulence

QURETECH BIO AB

Defeats bacterial virulence without affecting the normal bacterial flora

Market Need And Potential

Antibiotic resistance is a serious and accelerating problem. Infections with multidrug resistant bacteria cause around 25 000 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 to the point that oncological treatments and advanced surgery that make patients highly susceptible to infections will become difficult or impossible to perform. There is an urgent need for new remedies against bacterial infections. Regulatory bodies offer *fast track* for novel treatments of bacterial infections, and in the US an extra five years market exclusivity is awarded, once an antibacterial drug is approved.

Chlamydia is the most common sexually transmitted infection with 100 million new cases per annum globally. These infections are associated with a large economic burden. The direct medical cost was estimated to $3 billion in the US (2009). Moreover, *Chlamydia* is the main cause of Pelvic Inflammatory Disease (PID); main cause of infertility, accounting for health care costs of another $10B annually. More powerful antibiotics will be required to meet the on-going spread of antibiotic resistant *Chlamydia* that is now seen in 8% of the cases

Our Solution

QureTech Bio develops a revolutionary new class of antibacterial agents, virulence blockers, which block the bacteria's ability to cause disease. These agents selectively disarm the pathogenic properties of the bacteria, and are very well suited to replace antibiotics as front line drugs for the treatment of wide spread infections with high patient numbers.

One subset of QureTech Bio's small molecules is selective against *Chlamydia* and non-toxic to human cell lines. Proof of Concept studies in an animal disease model is on-going. Based on the same concept, similar molecules effective against tuberculosis are under development.

Competitive Advantages

•QureTech Bio's new class of compounds - virulence blockers, stop the infection by specifically blocking the pathogenic properties of *Chlamydia,* while final clearance is handled by the immune system

•Remaining immune system capability directed against *Chlamydia* will be followed up on in the *in vivo* validation study to trace any vaccine effect.

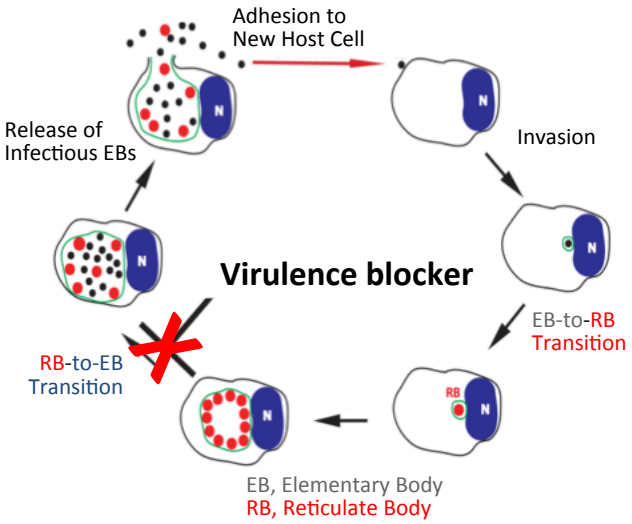
•The compounds are selective and target a pathogenic process, rather than bacterial survival. This reduces the risk of drug resistance development. The compounds will most likely also be effective against *Chlamydia* strains that are resistant to antibiotics used today.

•Virulence blockers are selective for *Chlamydia* and have no negative effect on the normal bacterial flora, that in it self serve as a very good barrier against pathogens.

•The virulence blockers are aimed as front line treatment of *Chlamydia* and present a solution to the 'antibiotic dilemma'. With minimal risk for drug resistance development the sales should not be affected by the restrictions of use that limits the market value of new antibiotics.

Competition

Today Chlamydia infections are treated with antibiotics like Doxycycline and Azithromycin. No new chemical entities are in clinical development for treatment of chlamydia.



Vaccine approaches are pursued in pre-clinical phase by Prokarium Ltd, Genocea Bioscience and Danish Vaccine Institute. Based on the strictly intracellular life cycle of *Chlamydia trachomatis* vaccine development is challenging.

IPR

QureTech Bio has full ownership of a recent PCT application covering the *Chlamydia trachomatis* indication. Patent has also been filed for a new treatment of Tuberculosis.

Current Status

Initial Proof of Concept animal studies with a positive outcome have been carried out for *Chlamydia* and complete read out is expected during Q1 2016. The chemical lead series is attractive with good potency and tractable properties based on a stable chemical platform. To identify a candidate drug 18 months of lead optimisation and profiling is required.

Partnerships/Collaborations Sought

QureTech Bio needs $5M over a 3 years period to make the Chlamydia project ready for clinical trials. A combined clinical phase 1&2 based on 200 patients will require additional $4M for completion. QureTech Bio also seeks funding and partnership to progress our virulence blocker project directed against Tuberculosis to full validation *in vivo.*

Team

Fritiof Pontén, CEO, PhD, former Team Leader at AstraZeneca in Mölndal
Sven Bergström, Chairman of the board, Prof. Microbiology Umeå University
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QureTech Bio is supported by Umeå Biotech Incubator (UBI), and has access to UBI's extended network.

QureTech Bio AB *develops a new class of anti-infective agents with the unique ability to selectively prevent the disease-causing properties of certain bacteria without disrupting the normal bacterial flora. Therefore the risk for resistance development is significantly reduced. The company was founded as a drug development company in 2010 to commercialise world-leading research from groups based at Umeå University, Sweden, and Washington University, St Louis, MO, USA.*

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REGION VÄSTERBOTTEN

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