

CONTRACT RESEARCH

STATENS
SERUM
INSTITUT



Preclinical research:

In vivo and in vitro testing of compounds for antimicrobial activity



Statens Serum Institut
5 Artillerivej
DK-2300 Copenhagen
Denmark

T +45 3268 3268
F +45 3268 3868
@ serum@ssi.dk
w ssi.dk

Services offered for testing of antimicrobial compounds

In vitro evaluation of antimicrobials

- Determination of minimum inhibitory concentrations (MIC) by broth dilution and agar dilution
- Time kill activity
- High throughput screening of growth inhibition
- Serum protein binding by ultrafiltration

In vitro models

- *In vitro* urinary tract infection model
- *In vitro* kinetic model
- Medical device related infection

Mathematical modeling

- Selection of optimum compartment model
- Estimation of population PK-parameters
- Monte Carlo PK/PD simulation
- Computer assisted design of experimental studies

In vivo Pharmacology

- Dosage regimens
- Serum/tissue concentrations

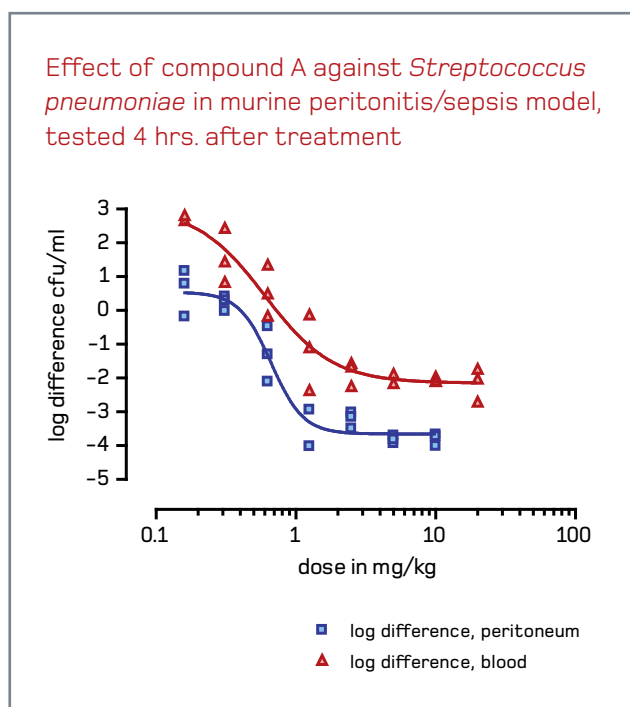
Experimental in vivo infection models in mice

- Peritonitis/sepsis model
- Peritonitis foreign body model
- Urinary tract infection model
- Pneumonia model
- Skin infection model
- Fungal sepsis model
- Thigh infection model

Animal model development

- Mice
- Rats
- Guinea pigs

Examples of human pathogens used in infection models



Peritonitis/sepsis model

- *Staphylococcus aureus* (MRSA)
- *Streptococcus pneumoniae*
- *Streptococcus pyogenes*
- *Escherichia coli* (ESBL)
- *Klebsiella* spp.
- *Enterobacter* spp.
- *Proteus mirabilis*
- *Salmonella* spp.
- *Pseudomonas aeruginosa*
- *Enterococcus faecalis*

Skin infection model

- *Staphylococcus aureus* (MRSA)
- *Streptococcus pyogenes*
- *Pseudomonas aeruginosa*

Urinary tract infection model

- *Escherichia coli* (ESBL)
- *Klebsiella* spp.
- *Proteus* spp.

For further information please contact

Microbiology & Infection Control
Statens Serum Institut
5 Artillerivej
2300 Copenhagen S
Denmark

Carina Vingsbo Lundberg, PhD
Tel.: +45 3268 8209
cvl@ssi.dk