



ImQuest BioSciences offers antimicrobial product development services that uniquely combine *in vitro* and animal model evaluations. The MicroSENS program facilitates the rapid screening of novel antimicrobial agents using established *in vitro* assays and the evaluation of active compounds in well-defined or customized animal models of infection.

***In Vitro* Antimicrobial Evaluations**

- CLSI broth-based microdilution for MIC and MBC determination
- Kill-curve analysis
- Analysis of bactericidal versus bacteriostatic activity
- Post-antibiotic effect evaluation
- Inhibition of biofilm development and disruption
- Persister cell assays
- Minimal biofilm inhibitory concentration (MBIC)
- Combination antimicrobial evaluations
- Resistance selection and characterization
- Mechanism of action studies
- β -lactamase assays

***In Vivo* Models**

- Neutropenic thigh model
- Peritonitis-sepsis model
- Systemic sepsis model
- Custom models (upon request)
- CLSI-based serum bactericidal effect (for some models)



Microbe Panels

The foundation of ImQuest's MicroSENS platform consists of a select panel of clinically relevant wild-type and antibiotic resistant microorganisms for use in both *in vitro* and *in vivo* assays.

Bacterial/fungal pathogens and clinical specimens

- Indication-specific microbes
- Clinically-relevant gram-negative and gram-positive organisms
- Anaerobic organisms
- Sexually transmitted organisms

ESKAPE and other drug-resistant pathogens

- Carbapenam resistant
- Extended spectrum beta-lactam resistant (ESBL)
- Methicillin resistant
- Penicillin resistant
- Vancomycin resistant
- Linezolid resistant
- NDM-1 resistant
- Multi-drug resistant

Evaluation of Antibiotic Efficacy against Biofilms

The ImQuest team has developed optimized microtiter plate-based protocols to evaluate new antibiotics for efficacy against biofilms. The protocol provides a high throughput procedure for studying biofilm formation and the inhibitory effects of antibiotics on biofilm formation. This method is a rapid and cost-effective means to quickly identify drug candidates with activity against biofilms.

Assay endpoints

- Total growth (planktonic and biofilm)
- Biofilm formation
- Viability

We also evaluate the efficacy of potential antimicrobial compounds on persister cell populations.

Development of Microbicides to Treat STIs

With our PrevSENS platform, the activity of potential new microbicides against sexually transmitted organisms is assessed and their mechanism of action defined.

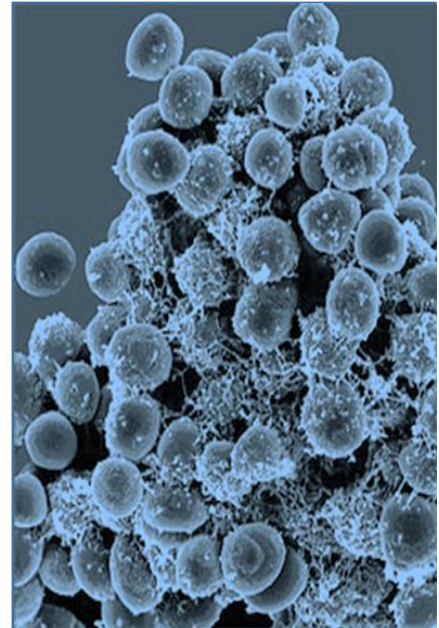
ImQuest BioSciences evaluates the toxicity of potential microbicide products in the following cells and tissues and can evaluate the induction of pro-inflammatory cytokine expression in each.

- Cervical, vaginal and rectal specific cell lines
- Epivaginal tissue
- Normal vaginal flora, e.g., *Lactobacilli*

All of our efficacy and toxicity assays are performed under conditions that mimic physiological conditions including vaginal pH and the presence of vaginal and seminal fluids.

Advance your antimicrobial development program forward more efficiently and expeditiously with ImQuest's MicroSENS and PrevSENS Services. ImQuest BioSciences, a preclinical CRO, specializes in services for the development of drugs, vaccines and biologics for the treatment and prevention of infectious disease, cancer and inflammatory disease.

[Contact ImQuest BioSciences to learn more.](#)



Viral and Microbial STI and Vaginosis Panel

Viruses

- HIV
- HSV-1
- HSV-2
- HPV
- HBV and HCV

Bacteria

- *Neisseria gonorrhoeae*
- *Gardnerella vaginalis*
- *Chlamydia trachomatis*
- *Bacteroides fragilis*

Yeasts

- *Candida albicans*

Protozoa

- *Trichomonas vaginalis*