



COMBAT ANTIMICROBIAL RESISTANCE AND ACCELERATE THERAPEUTIC DEVELOPMENT WITH ADVANCED MICROBIOLOGY

Antimicrobial resistance challenges, pathogen characterization complexities, and microbial genomics hurdles can derail even the most promising antimicrobial programs. When fighting resistant pathogens and developing effective therapies, you need a scientific partner who transforms these obstacles into actionable insights. Element's experts deliver specialized microbiology, genomics, and surveillance data that provide the evidence needed to advance your antimicrobial programs while adapting to evolving resistance patterns. Partner with our Iowa City team to focus on your innovative therapies while we provide the sophisticated testing that helps combat resistance and bring effective treatments to patients faster.

TRANSFORM MICROBIAL CHALLENGES INTO DEVELOPMENT ADVANTAGES

PARTNER WITH ELEMENT IOWA CITY, FORMERLY JMI LABS, TO:

- Access comprehensive antimicrobial resistance data to inform therapeutic development
- Leverage advanced genomic analysis to understand resistance mechanisms
- Transform microbial characterization challenges into precise analytical solutions
- Obtain reliable efficacy data with standardized microbial testing methods
- Address therapeutic development needs with well-documented microbiology studies

CLIA-CERTIFIED TESTING ACROSS YOUR ANTIMICROBIAL DEVELOPMENT PATHWAY

Advance your antimicrobial programs with specialized testing services that respond to the evolving landscape of resistance. Our comprehensive capabilities support critical aspects of antimicrobial research and development:

- SENTRY Antimicrobial Surveillance
- Microbial Efficacy Studies
- Advanced Genomics
- Bacteriophage Research



TARGET IDENTIFICATION

- Access global pathogen surveillance data
- Identify resistance patterns and mechanisms
- Leverage genomic insights for novel targets

CANDIDATE SCREENING

- Evaluate antimicrobial efficacy against diverse isolates
- Characterize spectrum of activity and potency
- Determine optimal dosing through MIC/kill-curve studies

CLINICAL DEVELOPMENT

- Support clinical trials with specialized testing
- Analyze clinical isolates with advanced methods
- Monitor emerging resistance with surveillance data



COMPREHENSIVE ANTIMICROBIAL RESEARCH SOLUTIONS

Our Iowa City laboratory is CLIA-certified, providing specialized testing services:

SENTRY ANTIMICROBIAL SURVEILLANCE

- Access to our Unique SENTRY Antimicrobial Surveillance System - Monitors worldwide pathogens and resistance patterns over time
- Collection of ~1 Million Well-Characterized Bacterial and Fungal - Diverse library of clinical isolates
- End to End Next Generation Sequencing on Illumina and Long-read Sequencing on Nanopore Platforms - Comprehensive genomic analysis
- Bacteriophage Testing - Specialized phage characterization
- Clinical Trial Support - Dedicated testing for antimicrobial development
- Bacteriophage Assays, Including Spot Testing, Culture Lysis, and Spectrum Studies - Specialized phage research capabilities

MICROBIAL STUDIES

- Broth Microdilution, Agar Dilution, Disk Diffusion, and Gradient Strip Correlations and Regression Analyses - Standardized susceptibility testing
- Quality Control Organism Range Studies - Robust method validation
- Antibacterial/Antifungal Spectrum and Potency - Comprehensive efficacy testing
- Passaging and Mutational Single-step Resistance Studies - Resistance development assessment
- MBC and Kill-curve Methods - Detailed bactericidal activity analysis
- Synergy and Drug Interaction Studies - Combination therapy evaluation
- Disk Development - Customized susceptibility testing methods

GENOMICS

- SNP Analysis Genotyping - Precise genetic variation mapping
- End to End Next Generation Sequencing on Illumina and Long-read Sequencing on Nanopore Platforms - Advanced genome characterization
- Whole Genome Sequencing - Complete genetic profiling
- Microbiome Testing: 16s rRNA or Shotgun Metagenomics - Comprehensive microbiome analysis
- Gene Expression and Transcriptomics Using RNA-Seq - Detailed gene activity assessment
- Various Typing Methods, Including Multilocus Sequence Typing (MLST), O:H Antigen, Pneumococcal Capsular Typing, and Others - Specialized strain characterization

READY TO ADVANCE YOUR ANTIMICROBIAL RESEARCH WITH COMPREHENSIVE RESISTANCE DATA?

Discover how Element Iowa City's specialized microbiology and genomics expertise can help drive your antimicrobial development programs. Our experienced scientists are ready to discuss your specific research needs and develop a customized testing approach.

Click or scan the QR code to learn more.

