



ILSE

INSTITUTE FOR LIFE
SCIENCE ENTREPRENEURSHIP

Institute For Life Science Entrepreneurship

Introduction



Institute for Life Science Entrepreneurship (ILSE)

A gateway for integrating the extraordinary academic, industrial & entrepreneurial life science resources of the NYC/NJ region into a dynamic enterprise

Goals

- 🌸 Facilitate development of early-stage ventures
- 🌸 Bridge academic and industry R&D
- 🌸 Advance basic and translational research
- 🌸 Increase economic development in region

Organization and Programs

Founded 2014, Independent 501(c)(3) non-profit, housed at Kean University, Union, NJ

Develop Entrepreneurs, Build Companies, Advance Translational Research

Life Science Accelerator

- CARB-X Accelerator
- Events
- Micro-seed Funding

Business Incubator

- Physical Lab Space
- Core Lab Network
- Consulting Network

Research Institute

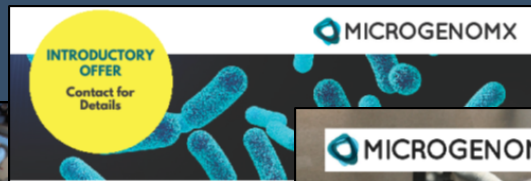
- ATCC Center for Translational Microbiology
- Grants
- Microgenomx

Microgenomx

- Research services
- Support for medical and industrial microbiology, drug-discovery and microbiome related companies to accelerate product development
- >20 clients to date



 MICROGENOMX



Expedite Your Microbial
Validate Your Proof of C
Customizable Workflow

COMPREHENSIVE MICROBIOLOGY & GENOMICS SOLUTIONS

Collective Expertise of Industry
Stalwarts Enables Cost-Effective
Validation

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Incubated at ILSE, Microgenomx focuses on
providing innovative solutions through re

1000 Morris Ave. STEM Bldg. 5-13 Union, NJ

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 MICROGENOMX

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Incubated at The Institute for Life Science Entrepreneurship, Microgenomx offers a variety of services to its partners, incubator labs, startup companies and small to large life-science, biotech and pharmaceutical companies. The services are focused in areas of microbiology, specifically in microbial genomics and bioinformatics, microbe research, and clinical microbiology and antibiotic resistance, with the goal of supporting clients in their R&D programs and successful corporate outcomes.

FEATURES

- ✓ Expert Consulting Services
- ✓ Integrated Research Programs (ITE or Study Based)
- ✓ Early Stage/Pilot Program Support
- ✓ CRO Project Management Services
- ✓ Recovery and Preclinical Service Provider Network

CAPABILITIES

MICROBIAL GENOME SEQUENCING AND ANNOTATION

- Bacterial
- Fungal
- Other Eukaryotes
- Viral

BIOINFORMATIC ANALYSIS

- Genomic
- Metagenomic
- Microbiomic
- Transcriptomic
- Epigenomics

PRECLINICAL AND CLINICAL MICROBIOME IMPACT STUDIES

- Experimental and Study Design
- Microbiome/Metagenome Data Generation & Analysis
- Culture/In and Characterization of Target Organisms
- Microbiome Repository and Database
- Microbiome-based Clinical Diagnosis

CUSTOM SERVICES

- Custom Synthesis of Tagged Bacterial & Fungal
- Clinical Isolate Libraries and Databases
- Mock Community Construction and Validation
- Microbiome Sample Preparation and QC
- Mock Community Construction & Validation M
- Microbiome Sample Preparation and QC
- Anaerobic Microbiology
- Ex vivo bacterial seeded tissue assay
- Spore Preparation

ANTIBIOTIC EVALUATION STUDIES

- Both or Agar Based MIC & MIC Determination
- Bactericidal/Bacteriostatic Assessment
- Kill Curve Studies
- Post-Antibiotic Effect
- Bacterial Persistence Studies
- Antibacterial Synergy/Antagonism Studies
- Minimum Inhibitory Concentration Studies
- Adhesion/Invasion Assays
- Spot/Spot Assay

RESISTANCE DEVELOPMENT STUDIES

- Succession/Mutation Frequency
- Serial Transfer/Passage
- Phenotypic Drug Resistance Characterization Studies
- WGS Drug Resistance Characterization Studies

 MICROGENOMX

Microgenomx Capabilities

- **Microbial Genome Sequencing & Annotation**
 - Bacterial, fungal, other eukaryotes, viral
- **Bioinformatic Analysis**
 - Genomic, metagenomic, microbiomic, transcriptomic, epigenomic
- **Preclinical & Clinical Microbiome Impact Studies**
 - Microbiome/metagenome data generation & analysis
 - Cultivation, characterization and repository/database of target organisms
 - Microbiome-based clinical diagnostics
- **Antibiotic Evaluation Studies**
 - MIC, MBC, bactericidal, synergy/antagonism, kill-curve post PAE and persistence studies
 - Biofilm studies
 - Spore preparation and sporicidal assays
 - Resistance studies (spontaneous mutation, serial passage, phenotypic, genotypic and WGS)
- **Custom Services**
 - Custom tagged strains, custom mock communities, anaerobic microbiology, microbiome sample preparation, clinical isolate libraries/databases

Microgenomx Capabilities

Microbial Genome Sequencing & Annotation

- Bacterial
- Fungal
- Other Eukaryotes
- Viral

Bioinformatic Analysis

- Genomic
- Metagenomic
- Microbiomic
- Transcriptomic
- Epigenomics

Custom Services

- Custom Synthesis of Tagged Bacteria & Fungi
- Clinical Isolate Libraries and Databases
- Mock Community Construction & Validation
- Microbiome Sample Preparation and QC
- Anaerobic Microbiology
- Adhesion/Invasion Assays
- Ex-vivo bacterial seeded tissue assay

Preclinical & Clinical Microbiome Impact Studies

- Experimental and Study Design
- Microbiome/Metagenome Data Generation & Analysis
- Cultivation and Characterization of Target Organisms
- Microbiome Repository and Database
- Microbiome-based Clinical Diagnosis

Antibiotic Evaluation Studies

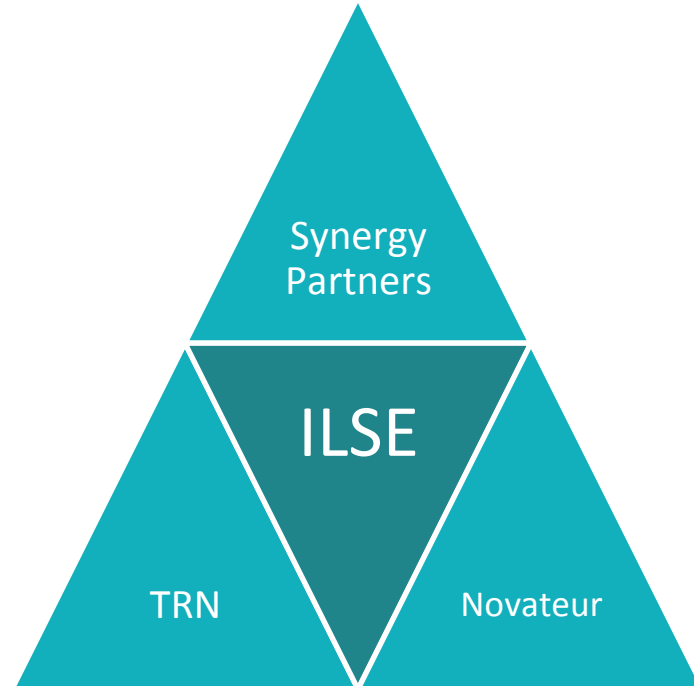
- Broth or Agar Based MIC & MBC Determination
- Bactericidal/Bacteriostatic Assessment
- Kill-Curve Studies
- Post-Antibiotic Effect
- Bacterial Persistence Studies
- Antibacterial Synergy/Antagonism Studies
- Minimal Biofilm Eradication Concentration Studies
- Spore Preparation
- Sporicidal Assay

Resistance Development Studies

- Spontaneous Mutation Frequency
- Serial Transfer/Passage
- Phenotypic Drug Resistance Characterization Studies
- WGS Drug Resistance Characterization Studies

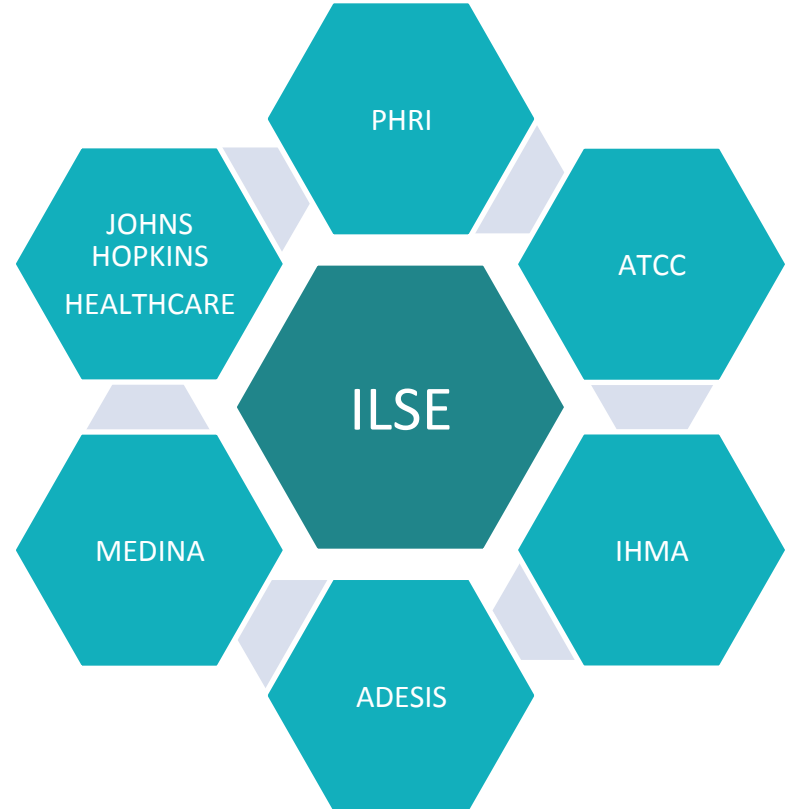
ILSE Consulting Network

- **A ILSE Network that provides coordinated consulting services to meet the technical and business needs of affiliates, clients and collaborators of ILSE**
- **Services Rendered are often at discounted and/or deferred terms**



ILSE Core Lab Network

- To supplement ILSE's capabilities in drug development, it has assembled well know service organizations to provide value added services to its clients and companies
- Services Rendered are coordinated by ILSE
- The spectrum of services vary from early discovery to late stage clinical support



ILSE Incubator: State-of-the-Art Wet Lab Suites



Suite 1 (1,229 sf)



Suite 2 (1,222 sf)



Suite 3 (588 sf)



Suite 4 (628 sf)



Suite 5 (612 sf)

- ❁ Each suite has a chemical fume hood, bio hood
- ❁ Shared analytical suite (NMR, LC/MS, Flow Cytometer)
- ❁ General biology and chemistry lab equipment

ILSE Management Team

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