

Outreach

Outreach Program

User agrees to T&C
(or simple MTA if required by client)

Abbreviations:
ADME = absorption, distribution, metabolism, excretion
LCMS = liquid chromatography mass spectrometry
MIC = minimum inhibitory concentration
MTA = material transfer agreement
OM = outer membrane
QC = quality control
SAR = structure-activity relationship
T&C = terms and conditions

Compound Handling

Send Vial, Tubes, Barcode

Samples/Information Received

Samples Formatted
Transfer to DMSO stock, Solids remain in vial
High Quality Storage

Structure Novel?
YES

Primary Screening

Antimicrobial Screen (single concentration 32 mg/L)

<p>ESKAPE Pathogens</p> <p><i>S. aureus (MRSA)</i> ATCC 43300 <i>E. Coli</i> ATCC 25922 <i>K. pneumoniae (MDR)</i> ATCC 700603 <i>A. baumannii</i> ATCC 19606 <i>P. aeruginosa</i> ATCC 27853</p>	<p>Fungi</p> <p><i>C. albicans</i> ATCC 90028 <i>C. neoformans</i> CBS 13168</p>	<p>Cell Penetration</p> <p><i>E. coli</i> <i>lpxC</i> (impaired OM) <i>E. coli</i> TolC (impaired efflux)</p>
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Active?
YES

Hit Confirmation

Confirm Activity and Counterscreen for False Hits

MIC test vs active org/strain

Cytotoxicity HEK293, resazurin

Selective for organism?

YES

RBC haemolysis

Critical Micelle Concentration

QC LCMS

biofractionation

purity >95%

purity <95%

Prioritisation

Activity and Toxicity Spectrum of Action

Chemical space novelty (fingerprint and/or structure)

Early SAR if analogs available from client

Data review

Hit Validation

Antimicrobial Characterisation		Early ADME				Hit Validation Chemistry
MIC vs broad panel	MIC with serum, lung surfactant	membrane permeability NPN, DiSC3(5)	plasma stability	microsome stability	protein binding	

CO-ADD Database

Rule of Antibiotics

ChEMBL