

Combating Antimicrobial Resistance

How ATCC's AMR Collection Supports the Global Scientific Community

Shahin Ali, PhD
Senior Scientist, ATCC Content

Briana Benton
Program Manager, Sequencing & Bioinformatics



About Us

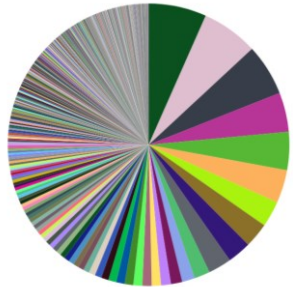


ATCC is a global leader in providing authenticated, high-quality biological resources and standards for industry, academia, and government.

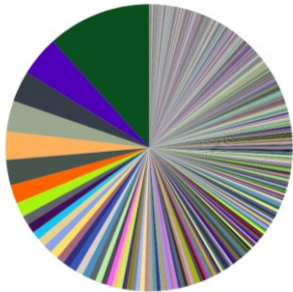
- Founded in 1925, ATCC is a private, nonprofit, global biological resource center and standards organization that provides scientists with the biomaterials and resources they need to conduct critical life science research.
- World's trusted, premier biological materials resource and standards development organization:
 - 4,000+ cell lines
 - 80,000+ microorganisms
 - Genomic and synthetic nucleic acids
 - Media, sera, and reagents
 - Advanced cell models
 - Standards



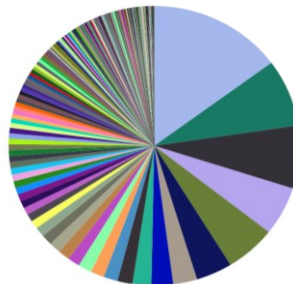
Credible Collections



Bacteriology
1226 genera



Mycology
1864 genera



Virology
200 genera

The most comprehensive, fully authenticated collection:

- 70,000+ bacteria, fungi, viruses, and protozoa
- Over 8,700 microbial type strains
- Over 1,000 derivatives, such as nucleic acid preparations

Brand recognition:

- Organizations and regulatory agencies specify ATCC cultures - USP, ISO, FDA, CLSI, USDA, ASTM, AOAC, etc.
- Over 475 reference strains recommended for use in quality control

Explore our
microbial products

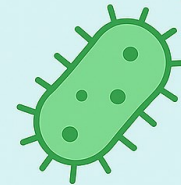


What Is Antimicrobial Resistance?

Antimicrobials are drugs or other agents used to treat microbial pathogens by inhibiting growth or killing the microorganism responsible for infection.

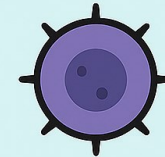
Antimicrobial resistance (AMR) is the ability of a microorganism to avoid the effects of antimicrobials.

Types of Antimicrobials



ANTIBIOTICS

drugs that treat bacterial infections



ANTIVIRALS

drugs that treat viral infections



ANTIFUNGALS

drugs that treat fungal infections

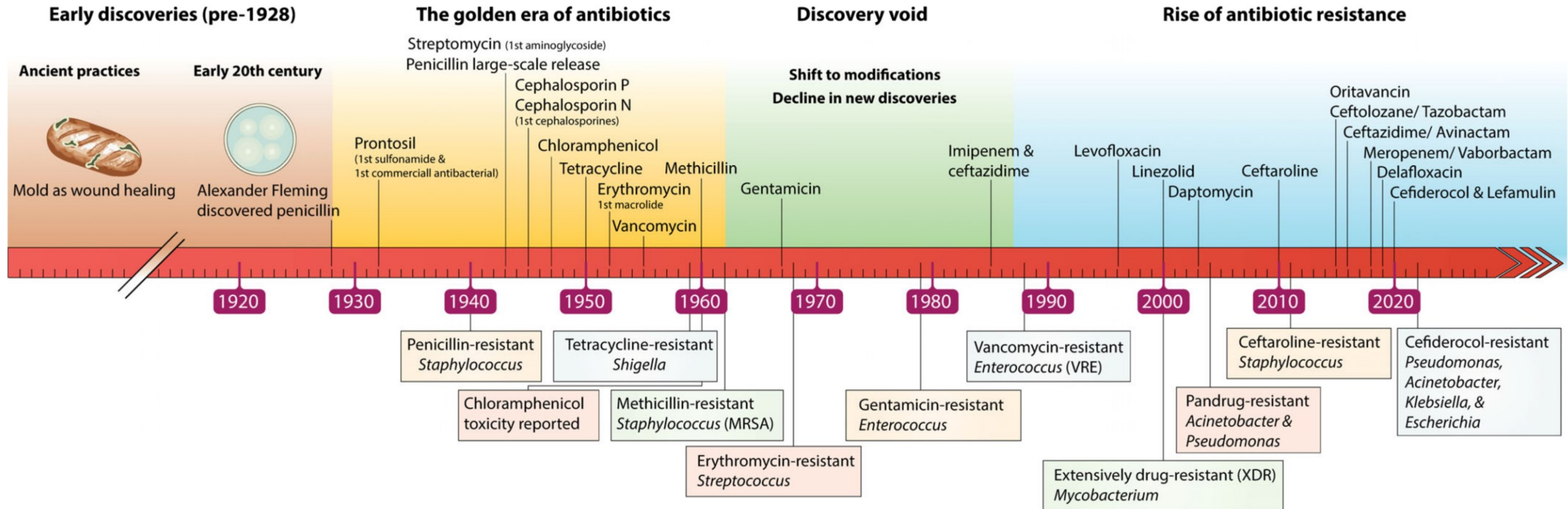


ANTIPARASITICS

drugs that treat parasitic infections

The Rise of Resistance

Significant events in antibiotic evolution



Tahmasebi H, et al. Biomolecules 15(1): 93, 2025. PubMed: 39858487

The Global Burden

- **Global Impact:** At least **1.27 million deaths** were directly caused by AMR in 2019, with nearly **5 million associated deaths** globally (*Lancet 2024*).
- **U.S. Burden:** Over **2.8 million AMR infections** and **35,000 deaths** annually (*CDC 2019*).
- **Economic Cost:** Treating the six most common AMR infections in U.S. healthcare costs over **\$4.6 billion per year** (*Nelson et al 2025 Clin Infect Dis 72: S17-S26*).

Risk Factors...

Factors Increasing Susceptibility to Infection and AMR

Age



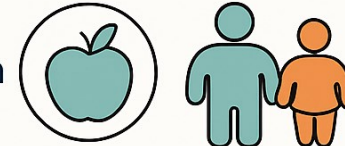
- Very young
- Older adults (>65 years)

Illness



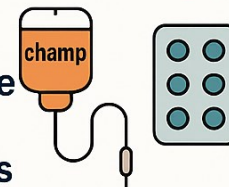
- Underlying chronic health conditions
- Compromised immune system
- Recent infection

Nutrition



- Malnutrition
- Obesity

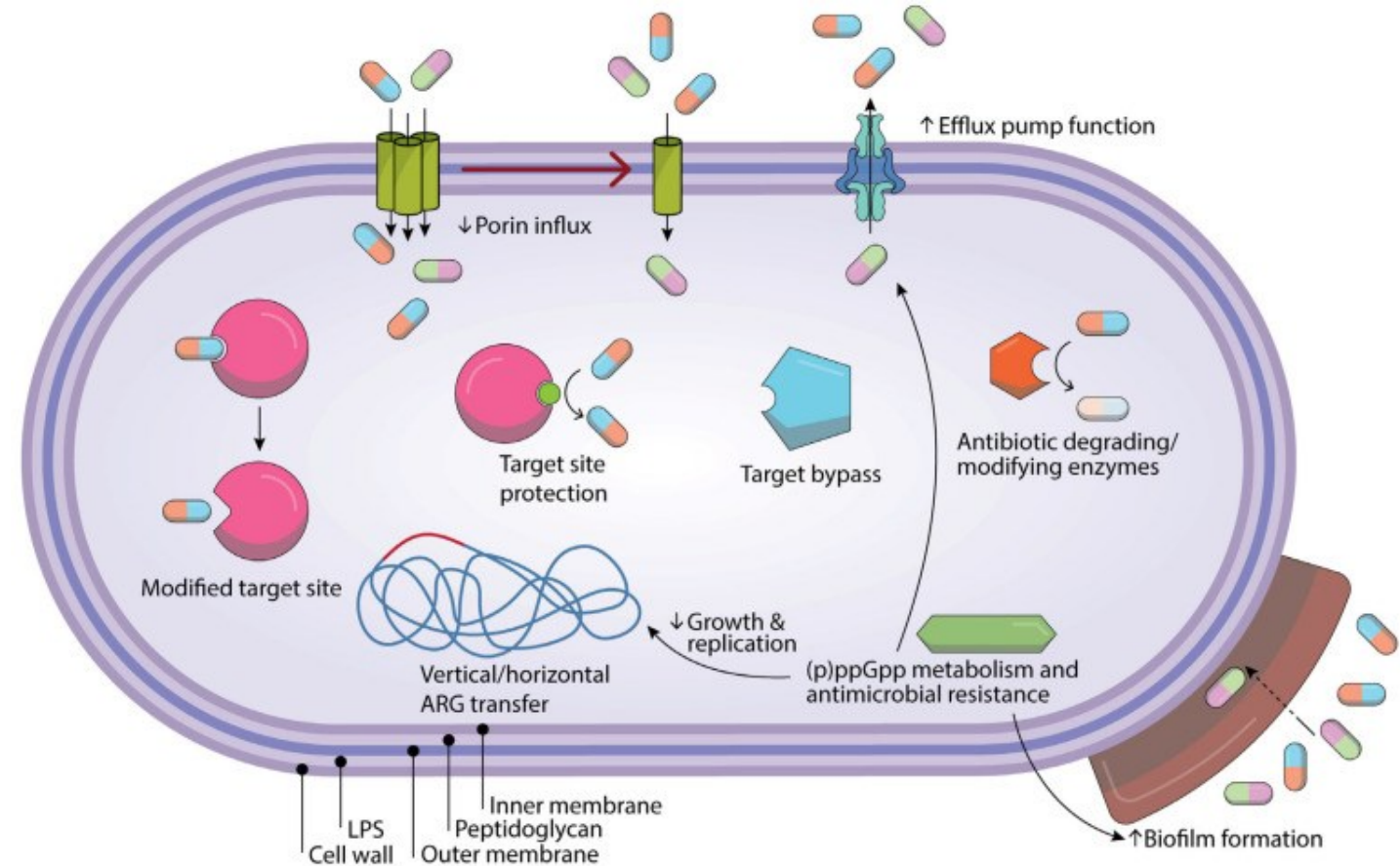
Immuno-suppressive
Drugs or
Treatments



- Chemotherapy, radiation therapy, and organ transplant immunosuppressants
- Long-term antibiotic use
- Dysregulated immune responses

Types of Resistance Mechanisms

- Decreased influx, accumulation, or uptake
- Active efflux pumps
- Enzymatic inactivation or destruction
- Alternative enzyme
- Target modification or mutation
- Biofilm protection



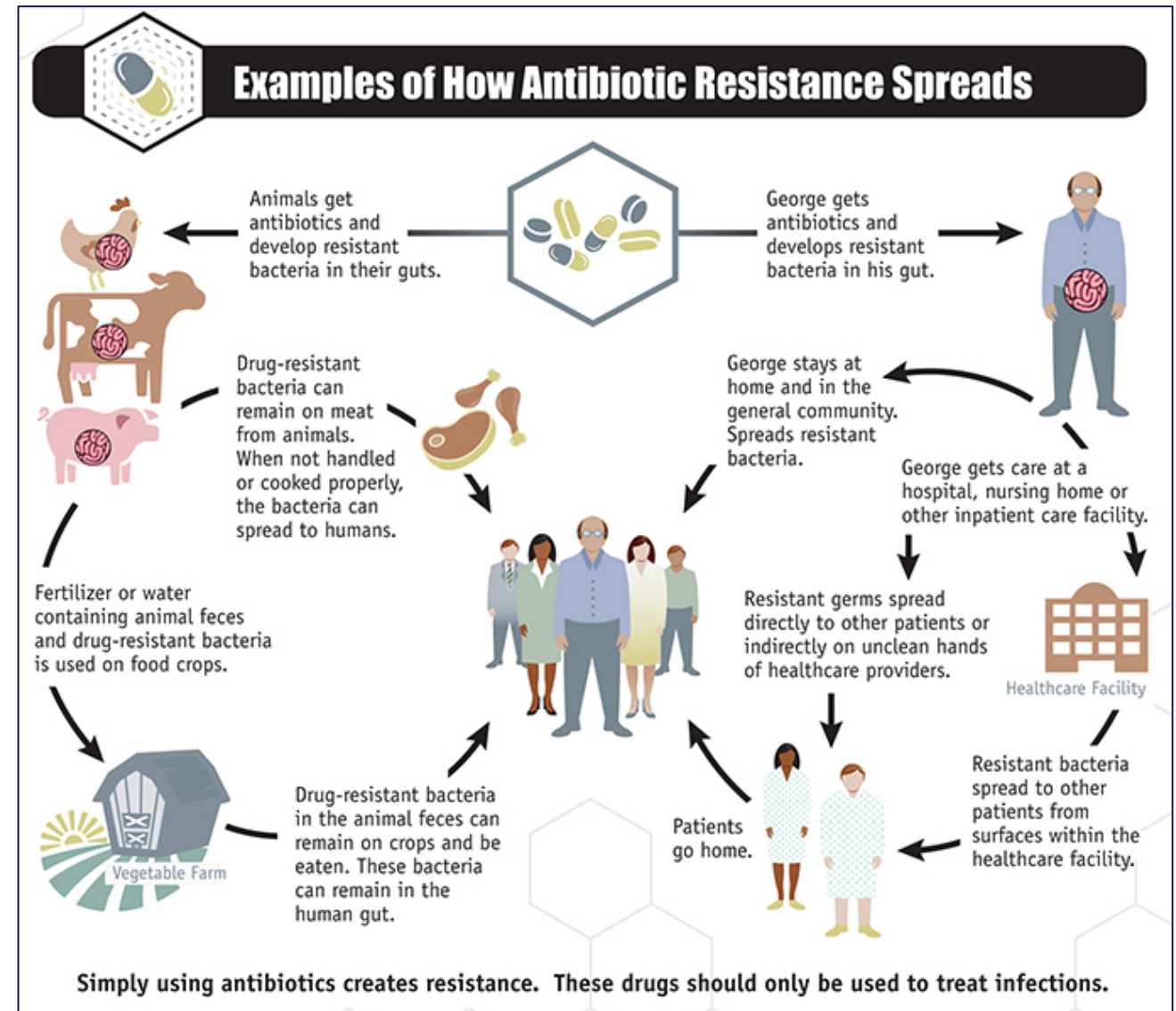
Tahmasebi H, et al. Biomolecules 15(1): 93, 2025. PubMed: 39858487

Spread of Resistance

Healthcare-acquired infections (HAIs): infections that occur within 30 days of receiving health care

Community-acquired infections (CAIs): infections that cannot be traced to healthcare

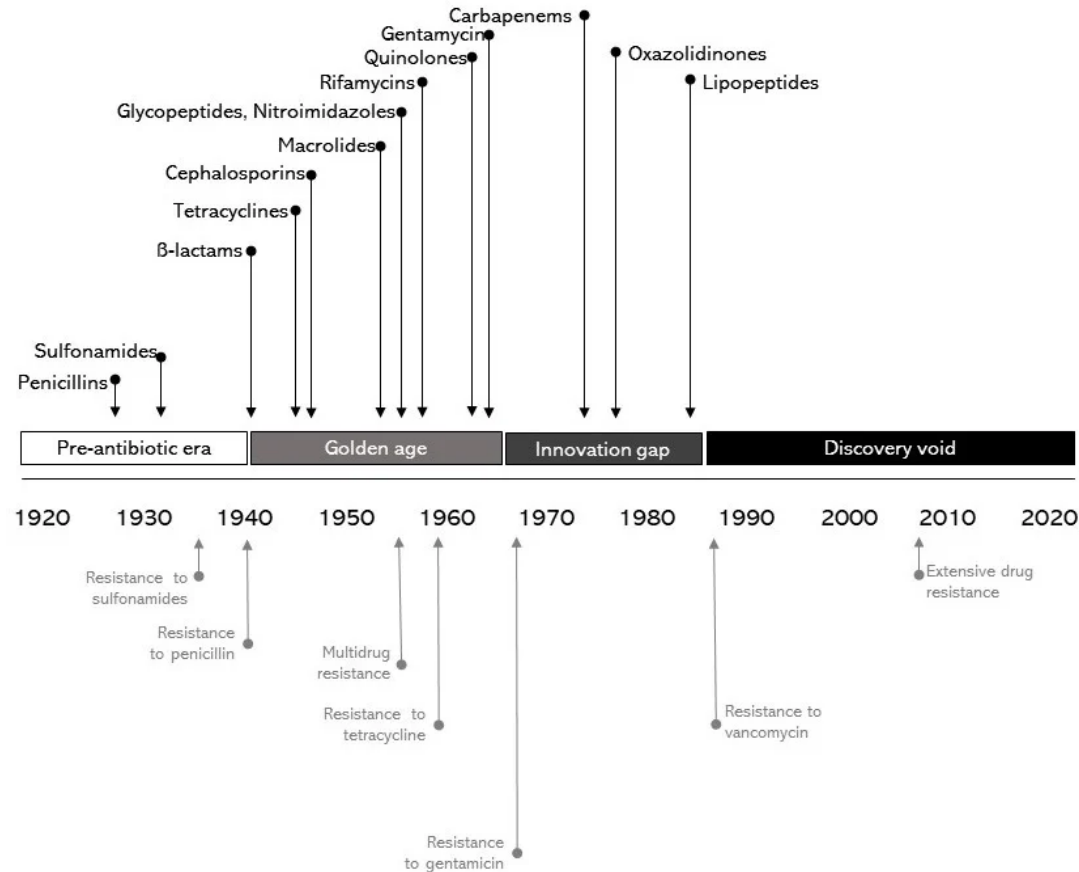
- A recent *Science Advances* study¹ of livestock manure worldwide collected identified:
- > 2,291 known ARGs (resistant to 30 antibiotic classes)
- 3,166 cryptic ARGs
- ARG levels 2–18 times higher than in human feces, sewage, and soil. ¹DOI: 10.1126/sciadv.adt8073



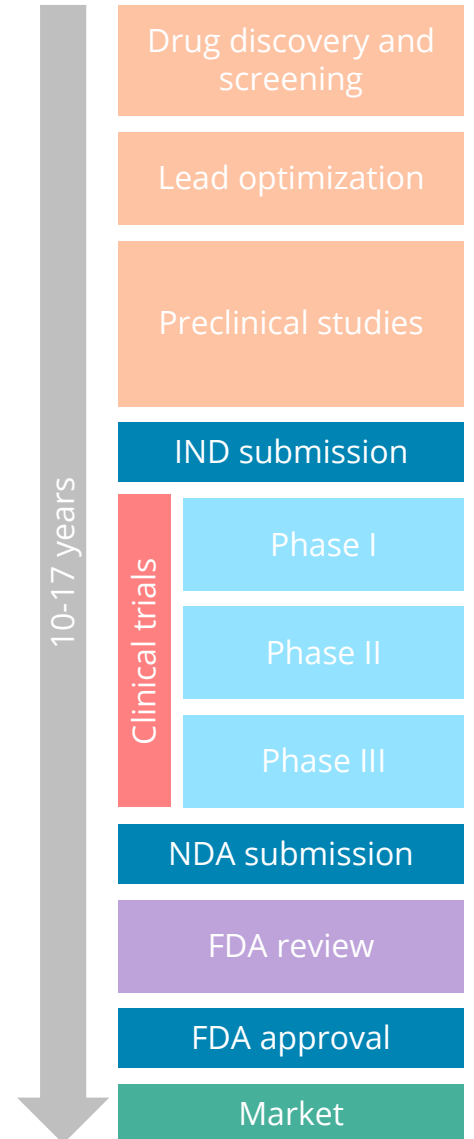
Challenges

Developing new antimicrobials is time intensive with low ROI

- **Discovery:** Basic research
- **Testing:** Preclinical and clinical trials
- **Approval:** FDA (and other) requirements and application
- **Deployment:** Knowledge, adoption
- **Cost:** Cost of drug discovery, development, testing, and approval
- **Return on investment:** Generic drugs are cheap, and new mechanisms are kept as drug of last resort



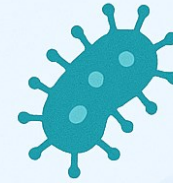
Meagher KM. Ama J Ethics 26(5): E418-428, 2024.



Meeting the Challenge: Global Efforts

- High-Level Political Commitment
- Evidence-Informed Policy Making
- One Health & Multisectoral Collaboration

WHO Global Research Agenda for Antimicrobial Resistance (AMR) in Human Health. 40 Research Priorities: 33 on bacterial and fungal infections. 7 on multidrug-resistant tuberculosis (MDR-TB).



NEW ANTIBIOTICS

- Lariocidin: novel ribosome-targeting antibiotic
- Tethered MCPs: blocks bacterial outer membrane formation



INNOVATIVE TECHNOLOGIES

- Evolution-resistant compounds
- CRISPR-Cas systems targeting resistance
- Rapid cyclic peptide synthesis



ALTERNATIVES TO ANTIBIOTICS

- Phage therapy
- Monoclonal antibodies
- Efflux pump inhibitors



DIAGNOSTICS & SURVEILLANCE

- Rapid phenotypic testing
- WHO's TrACSS surveillance system

Meeting the Challenge: ATCC Offerings

Microorganisms

- Priority Antimicrobial-Resistant Strains
- Antimicrobial-resistant bacteria, fungi, and protozoa
- Bacteriophages
- Microbial panels
- CLSI reference strains for assay QC

Cell lines

- Primary cells for drug toxicity screening studies
- Media and reagents to support cellular growth

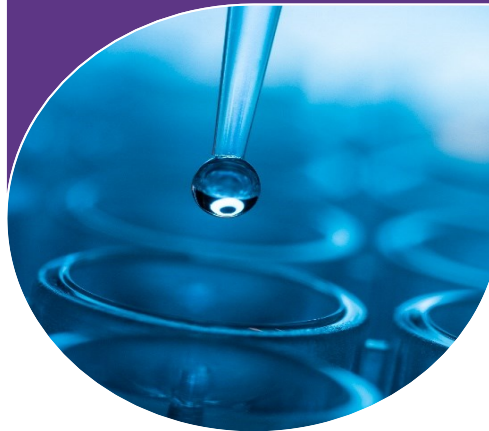
Nucleic acids

- Quantitative genomic nucleic acids
- Nucleic acid extraction service

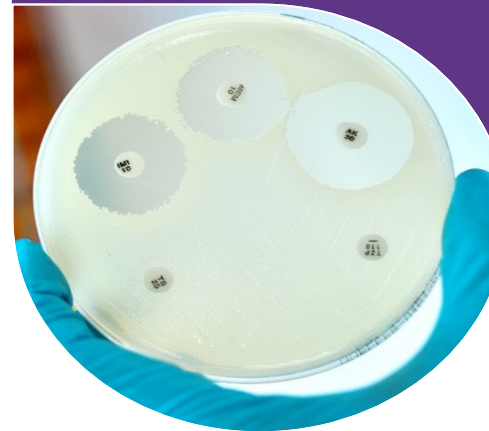
Molecular detection



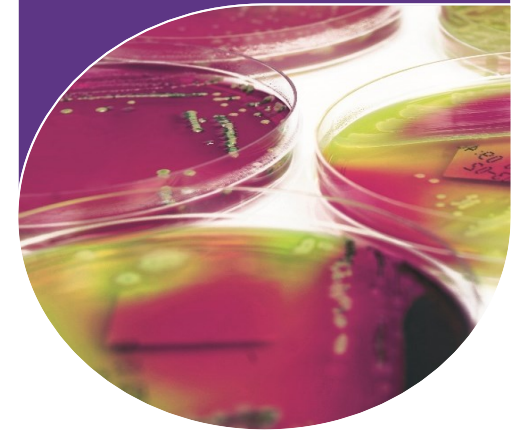
Assay development



Novel therapeutics



Sterility protocols



Meeting the Challenge: ATCC Offerings

Priority Antimicrobial-Resistant Strains



Selection

- Recent, clinically relevant isolates
- Prevalent pathogenic species
- Multidrug-resistant and extensively drug-resistant strains



Analysis

- *De novo* genome sequencing and annotation
- Identification of antimicrobial resistance genes
- Evaluation of antimicrobial resistance and susceptibility



Collection

- Strains authenticated and categorized by ATCC
- Genotypically, phenotypically, and functionally characterized

Species	Strains
<i>Acinetobacter baumannii</i>	13
<i>Klebsiella pneumoniae</i>	15
<i>Pseudomonas aeruginosa</i>	16
<i>Escherichia coli</i>	17
<i>Streptococcus pneumoniae</i>	15
<i>Proteus mirabilis</i>	3
<i>Enterobacter</i> spp.	6
<i>Citrobacter freundii</i>	4
<i>Neisseria gonorrhoeae</i>	5
<i>Staphylococcus aureus</i>	2
<i>Serratia surfactantfaciens</i>	1
<i>Citrobacter braakii</i>	1
<i>Klebsiella quasipneumoniae</i>	2

Meeting the Challenge: ATCC Offerings

Priority Antimicrobial-Resistant Strains

Acinetobacter baumannii Bouvet and Grimont

BAA-3252™

[Download Genome](#)

[LEARN ABOUT THE ATCC GENOME PORTAL >](#)

This drug-resistant bacterium was isolated in 2014 from the abscess of a 57-year-old male in Spain. This product can be used for all stages of the discovery and development process for novel antimicrobials and therapeutics, molecular-based detection assays, and updated sterility protocols.

Product category	Bacteria
Product type	Drug-resistant bacterium
Strain designation	1074318
Type strain	No
Genome sequenced strain	Yes
Isolation source	Abscess
Geographical isolation	Spain
Applications	Antimicrobial resistance research Bioinformatics Drug development
Product format	Frozen
Storage conditions	-80°C or colder

Buy Now

Price: **\$297.00 ea**

Discounts may be available for our fellow nonprofit organizations. [Login](#) to see your price.

Generally ships within 1-3 business days

Quantity

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Documentation

- [Product sheet](#)
- [Certificate of analysis](#)
- [Safety data sheet](#)
- [Antimicrobial resistance report](#)
- [Characterization data](#)



Priority AMR Strains Brochure
www.atcc.org/AMR-brochure

Characteristics

Gram stain

Negative

Annotated genes

ADC-2
adeA
adeB
adeC
adeF
adeG
adeI
adeJ
adeK
adeR
adeS
APH(3")-Ib
APH(6)-Id
macA
macB
mexB
mexK
OXA-66
tet(A)

Susceptibility profile

Resistant
Cefazolin
Cefepime
Cefotaxime
Ceftazidime
Ceftriaxone
Ciprofloxacin
Imipenem
Levofloxacin
Meropenem
Piperacillin-tazobactam
Tetracycline
Trimethoprim-sulfamethoxazole

Susceptible
Ampicillin-Sulbactam
Gentamicin
Tobramycin

Meeting the Challenge: ATCC Offerings

Priority Antimicrobial-Resistant Strains



Table 1: *Acinetobacter baumannii*

Antibiotic Class	Antibiotic Type	BAA-3252™	BAA-3257™	BAA-3275™	BAA-3276™	BAA-3278™	BAA-3282™	BAA-3283™	BAA-3300™	BAA-3301™	BAA-3302™	BAA-3311™	BAA-3320™	BAA-3338™
		<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>	<i>Acinetobacter baumannii</i>
Aminoglycosides	Gentamicin	S	R	S	S	R	S	S	R	R	I	S	S	R
	Tobramycin	S	R	S	S	R	I	S	R	R	I	S	S	I
Carbapenems	Imipenem	R	I	I	R	I	R	R	I	I	R	S	R	R
	Meropenem	R	S	R	R	R	R	R	R	S	I	S	R	R
Cephalosporins	Cefazolin	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefepime	R	S	R	R	R	R	R	R	I	R	S	R	R
	Cefotaxime	R	R	R	R	R	R	R	R	R	R	I	R	R
	Ceftazidime	R	I	R	R	R	R	R	R	R	R	S	I	R
	Ceftriaxone	R	R	R	R	R	R	R	R	R	R	I	R	R
Diaminopyrimidines	Trimethoprim-sulfamethoxazole	R	R	R	R	R	R	R	S	R	R	S	S	R
Fluoroquinolones	Ciprofloxacin	R	R	I	R	R	R	R	R	R	R	S	S	R
	Levofloxacin	R	R	S	R	R	R	R	R	R	R	S	S	R
Penicillins	Ampicillin/Sulbactam	S	I	S	S	I	S	I	I	S	R	S	I	R
	Piperacillin/Tazobactam	R	R	R	R	R	R	R	R	R	R	I	R	R
Tetracyclines	Tetracycline	R	S	R	S	S	R	R	S	S	S	S	S	S
Isolation Information	Country	Spain	Spain	France	United States	Honduras	United States	Taiwan	Singapore	Italy	Italy	Korea	Venezuela	United States
	Year of Origin	2014	2004	2006	2014	2006	2004	2006	2004	2006	2015	2006	2006	2004
	Source	Abscess	Blood	Blood	Sputum	Catheters	Wound	Sputum	Trachea	Blood	Blood	Blood	Blood	Blood
	Patient Gender	Male	Female	Male	Male	Female	Female	Female	Male	Female	Male	Female	Male	Female
	Patient Age	57 years	68 years	84 years	75 years	0 years	51 years	80 years	71 years	53 years	41 years	73 years	19 years	64 years

Click on the ATCC catalog number to view the product information and susceptibility profile on the ATCC website.

Click on the ATCC species name to view the complete de novo hybrid genome assembly with annotated antibiotic resistance genes on the ATCC Genome Portal.

Antibiotic susceptibility was obtained using VITEK 2 AST cards (bioMérieux). Minimum inhibitory concentration (MIC) ranges for resistant (R; red), intermediate (I; yellow), and susceptible (S; green) are based on criteria within the Clinical and Laboratory Standards Institute (CLSI) Performance Standards for Antimicrobial Susceptibility Testing, 27th Edition. The susceptibility profile information for this strain is initial characterization data acquired during the ATCC accessioning process and are batch specific.



Priority AMR Strains Brochure
www.atcc.org/AMR-brochure

Meeting the Challenge: ATCC Offerings

Priority Antimicrobial-Resistant Strains

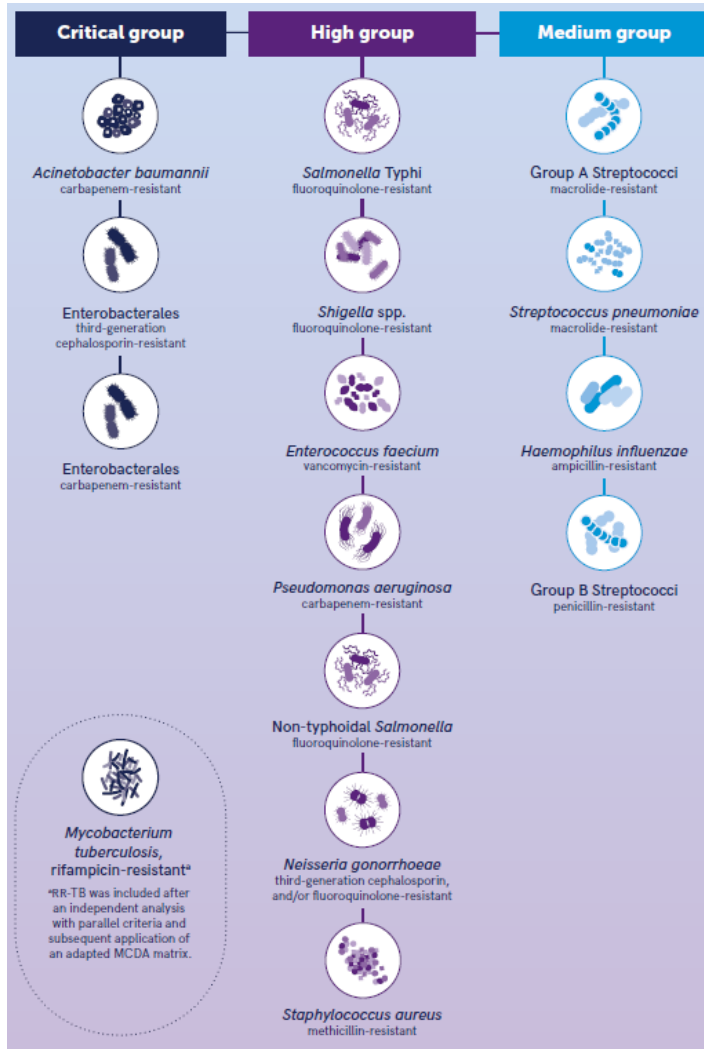


Table 4: *Escherichia coli*

Antibiotic Class	Antibiotic Type	BAA-3244™	BAA-3246™	BAA-3250™	BAA-3251™	BAA-3253™	BAA-3254™	BAA-3260™	BAA-3281™	BAA-3286™	BAA-3287™	BAA-3289™	BAA-3292™	BAA-3303™	BAA-3305™	BAA-3307™	BAA-3310™	BAA-3337™
		<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>	<i>Escherichia coli</i>
Aminoglycosides	Amikacin	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
	Gentamicin	R	R	S	R	R	R	R	S	R	R	R	S	R	R	R	R	S
	Tobramycin	R	R	S	R	I	R	R	S	R	R	I	S	R	R	I	I	R
Carbapenems	Ertapenem	S	R	S	S	S	S	S	R	R	R	S	R	R	S	S	S	S
	Imipenem	S	R	S	S	S	S	S	R	R	S	S	S	S	S	S	S	S
	Meropenem	S	R	S	S	S	S	S	R	R	R	S	R	S	S	S	S	S
Cephalosporins	Cefalotin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefazolin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Cefepime	R	S	R	R	R	R	R	S	S	R	R	S	S	R	S	S	R
	Cefotaxime	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R	S	R
	Cefotetan	R	R	S	S	S	I	R	I	R	S	S	S	S	S	R	S	S
	Cefoxitin	R	R	S	S	S	R	R	R	R	S	S	I	I	S	R	R	S
	Cefpodoxime	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R	S	R
	Ceftazidime	R	R	R	R	R	R	R	R	R	R	R	I	I	R	R	S	R
	Ceftazidime/Avibactam	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
	Ceftriaxone	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	S	R
	Cefuroxime	R	R	R	R	R	R	R	R	R	R	I	R	R	R	R	I	R
	Cefuroxime Axetil	R	R	R	R	R	R	R	R	R	R	I	R	R	R	R	I	R
	Ceftolozane/Tazobactam	S	R	S	S	S	I	R	R	R	R	R	R	R	S	R	S	I
Diaminopyrimidines	Trimethoprim-Sulfamethoxazole	S	R	R	R	R	R	R	S	R	R	R	R	S	S	R	R	R
Fluoroquinolones	Ciprofloxacin	R	R	R	R	R	R	R	R	R	R	R	S	R	R	S	R	S
	Levofloxacin	R	R	R	R	R	R	R	R	R	R	R	S	R	R	S	R	S
	Moxifloxacin	R	R	R	R	R	R	R	R	R	R	R	S	R	R	S	R	S
Glycylcyclines	Tigecycline	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Monobactams	Aztreonam	R	R	R	R	R	R	R	R	R	R	S	R	R	R	R	S	R
Nitrofurans	Nitrofurantoin	I	S	S	S	S	S	R	S	S	S	S	S	S	S	I	S	S
Penicillins	Amoxicillin/Clavulanic Acid	I	R	S	I	I	R	R	R	R	I	I	R	R	I	R	I	I
	Ampicillin/Sulbactam	R	R	S	R	R	R	R	R	R	R	R	R	R	I	R	R	R
	Ampicillin	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	Piperacillin/Tazobactam	S	R	S	S	I	I	R	R	R	R	I	R	R	S	R	R	S
Quinolones	Nalidixic Acid	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	S
Tetracyclines	Tetracycline	R	R	R	R	R	R	R	R	R	R	R	R	S	R	R	S	S
Isolation Information	Country	Argentina	Israel	Turkey	Nigeria	Czech Republic	Mexico	Nigeria	United States	Israel	Italy	Argentina	Mexico	Russia	Mexico	Thailand	Greece	Argentina
	Year of Origin	2014	2014	2014	2014	2014	2014	2014	2014	2014	2013	2012	2014	2014	2012	2013	2013	2014
	Source	Abscess	Urine	Blood	Urine	Urine	Abscess	Urine	Peritoneal fluid	Urine	Respiratory sputum	Urine	Abscess	Pancreas	Urine	Stomach	Urine	Urine
	Patient Gender	Male	Male	Female	Female	Female	Female	Female	Female	Female	Female	Female	Male	Female	Male	Male	Female	Male
	Patient Age	50 years	83 years	51 years	40 years	78 years	70 years	46 years	40 years	83 years	34 years	38 years	48 years	56 years	42 years	18 years	54 years	2 years

Meeting the Challenge: ATCC Offerings

WHO bacterial priority pathogens list, 2024



ATCC's WHO BPPL-2024 Portfolio

WHO Priority	Species	AMR	No of ATCC® strains
Critical	<i>Klebsiella pneumoniae</i>	Carbapenem resistant	18
Critical	<i>Escherichia coli</i>	Third-generation cephalosporin resistant	13
Critical	<i>Acinetobacter baumannii</i>	Carbapenem resistant	17
Critical	<i>Mycobacterium tuberculosis</i>	Rifampicin resistant	3
Critical	<i>Escherichia coli</i>	Carbapenem resistant	9
Critical	<i>Klebsiella pneumoniae</i>	Third-generation cephalosporin resistant	21
High	<i>Enterococcus faecium</i>	Vancomycin resistant	4
High	<i>Pseudomonas aeruginosa</i>	Carbapenem resistant	15
High	<i>Enterobacter</i> spp.	Carbapenem resistant	7
High	<i>Neisseria gonorrhoeae</i>	Fluoroquinolone resistant	5
High	<i>Staphylococcus aureus</i>	Methicillin resistant	70
High	<i>Enterobacter</i> spp.	Third-generation cephalosporin resistant	4
High	<i>Citrobacter</i> spp.	Third-generation cephalosporin resistant	5
High	<i>Proteus</i> spp.	Third-generation cephalosporin resistant	3
High	<i>Serratia</i> spp.	Third-generation cephalosporin resistant	1
Medium	Group A streptococci	Macrolide resistant	5
Medium	<i>Streptococcus pneumoniae</i>	Macrolide resistant	28
Medium	<i>Haemophilus influenzae</i>	Ampicillin resistant	2

<https://www.who.int/publications/i/item/9789240093461>

A word cloud visualization of bacterial genera names. The words are arranged in a circular pattern, with larger fonts indicating higher frequency or importance. The most prominent words include *Staphylococcus aureus*, *Escherichia coli*, *Streptococcus pneumoniae*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Enterococcus faecium*, *Mycobacterium tuberculosis*, and *Vibrio cholerae*. Other visible genera include *Bacillus*, *Listeria*, *Corynebacterium*, and various species of *Haemophilus* and *Moraxella*.



Meeting the Challenge: ATCC Offerings

AMR data available for 615 strains across 157 bacterial species in ATCC's collection

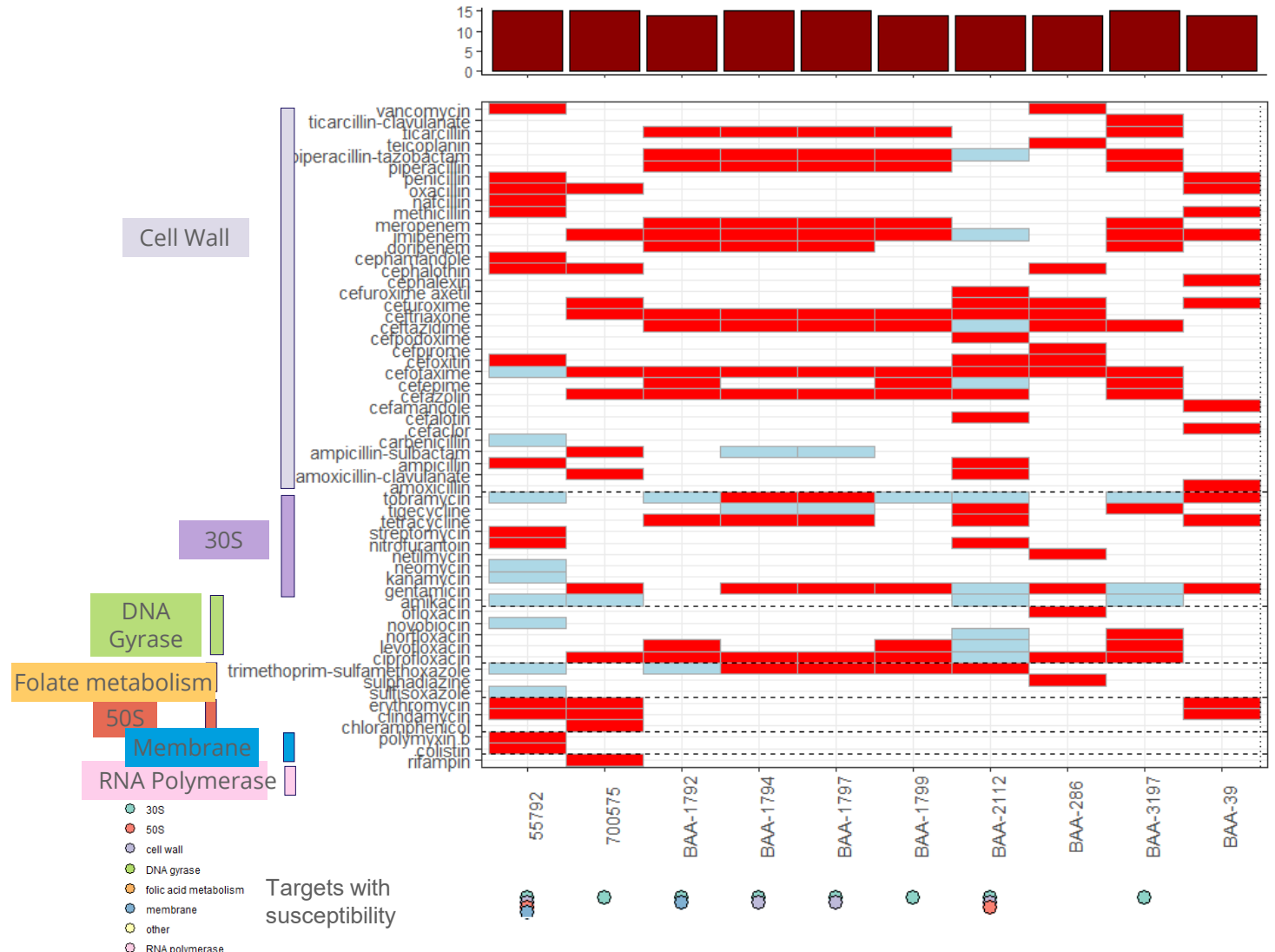


Some of the most drug resistance strains

ATCC® No.	Species
55792™	<i>Burkholderia vietnamiensis</i>
700575™	<i>Staphylococcus</i> spp.
BAA-1794™	<i>Acinetobacter baumannii</i>
BAA-1797™	<i>Acinetobacter baumannii</i>
BAA-3197™	<i>Pseudomonas aeruginosa</i>
BAA-1792™	<i>Acinetobacter baumannii</i>
BAA-1799™	<i>Acinetobacter baumannii</i>
BAA-2112™	<i>Pseudomonas aeruginosa</i>
BAA-286™	<i>Dysgonomonas gadei</i>
BAA-39™	<i>Staphylococcus aureus</i>

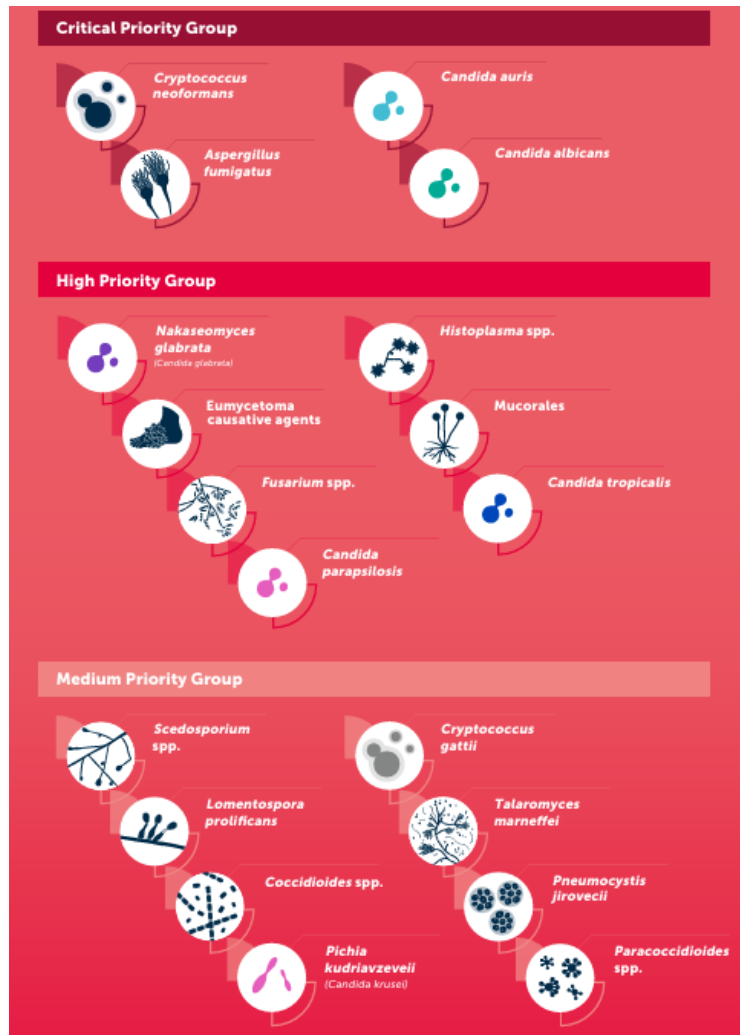
Some strains in the collection known to be resistant to 14-15 antibiotics.

Even among these strains, some are known to be susceptible to mechanistically diverse antibiotics.

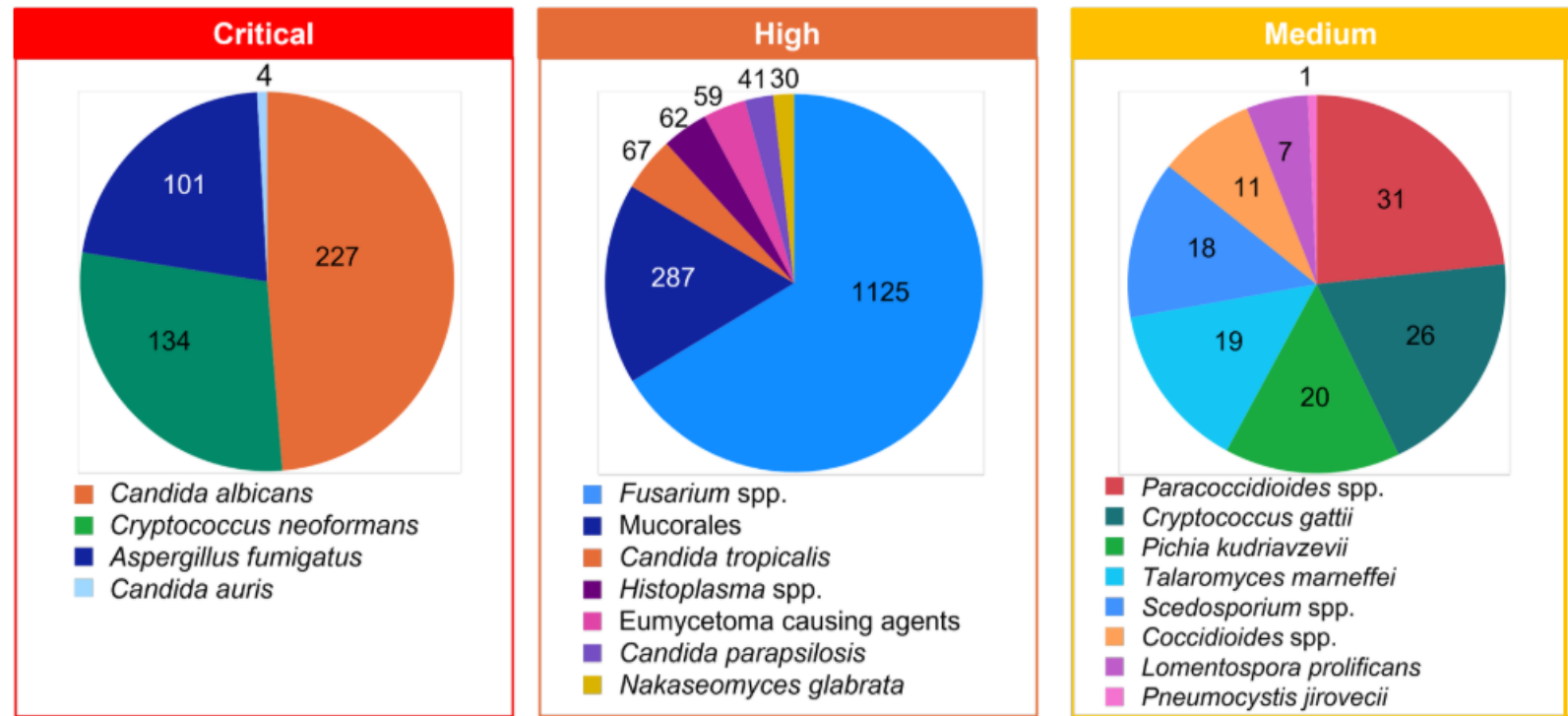


Meeting the Challenge: ATCC Offerings

WHO fungal priority pathogens 2022 list to guide research, development, and public health action



Number of ATCC strains on the WHO fungal priority pathogens list






















**Pneumocystis jirovecii* is provided as synthetic DNA (unculturable)

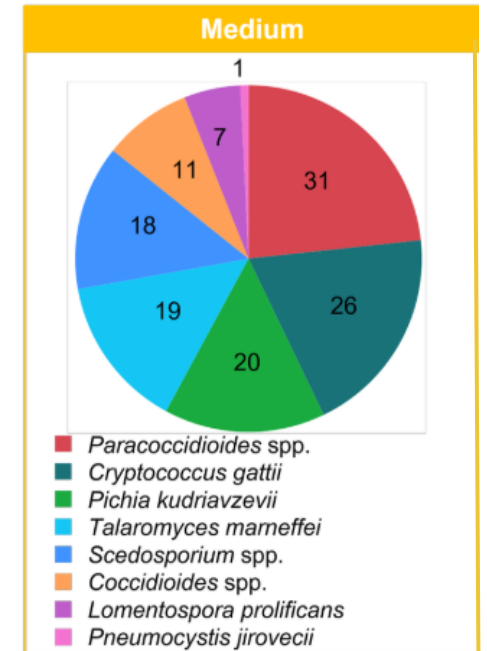
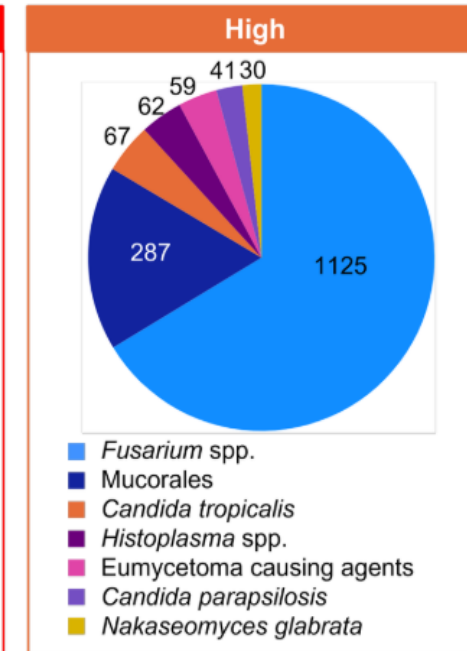
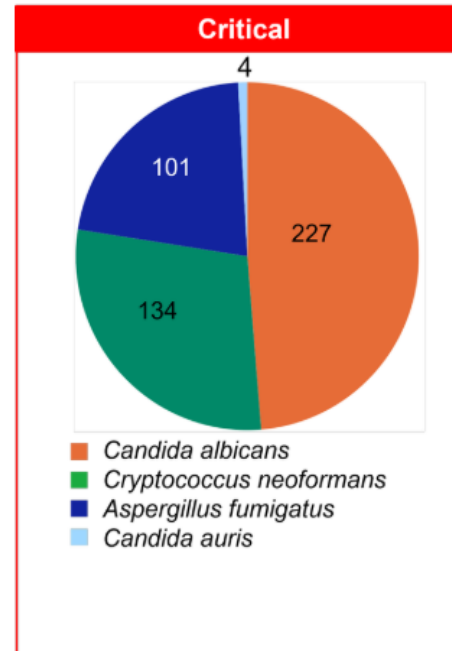
<https://www.atcc.org/blogs/2022/who-releases-priority-fungal-pathogens-list>

Meeting the Challenge: ATCC Offerings

WHO fungal priority pathogens 2022 list to guide research, development, and public health action

Critical group	High group	Medium group
 <i>Cryptococcus neoformans</i>	 <i>Nakaseomyces glabrata</i> (<i>Candida glabrata</i>)	 <i>Scedosporium</i> spp.
 <i>Candida auris</i>	 <i>Histoplasma</i> spp.	 <i>Lomentospora prolificans</i>
 <i>Aspergillus fumigatus</i>	 Eumycetoma causative agents	 <i>Coccidioides</i> spp.
 <i>Candida albicans</i>	 Mucorales	 <i>Pichia kudriavzevii</i> (<i>Candida krusei</i>)
	 <i>Fusarium</i> spp.	 <i>Cryptococcus gattii</i>
	 <i>Candida tropicalis</i>	 <i>Talaromyces marneffeii</i>
	 <i>Candida parapsilosis</i>	 <i>Pneumocystis jirovecii</i>
		 <i>Paracoccidioides</i> spp.

Number of ATCC strains on the WHO fungal priority pathogens list



**Pneumocystis jirovecii* is provided as synthetic DNA (unculturable)

<https://www.who.int/publications/i/item/9789240060241>

<https://www.atcc.org/blogs/2022/who-releases-priority-fungal-pathogens-list>

Vial to File

Physical Repository

- Strains
- Derivatives
- Standards
- Reference materials



Authenticated Reference Data

- Sequencing data
- Assembled genomes
- Annotated genes



Drive scientific advancement by provide the scientific community with high quality, annotated whole genome sequence (WGS) information to complement ATCC's biological materials.

ATCC Genome Portal

The only authenticated reference genome database for ATCC microbes



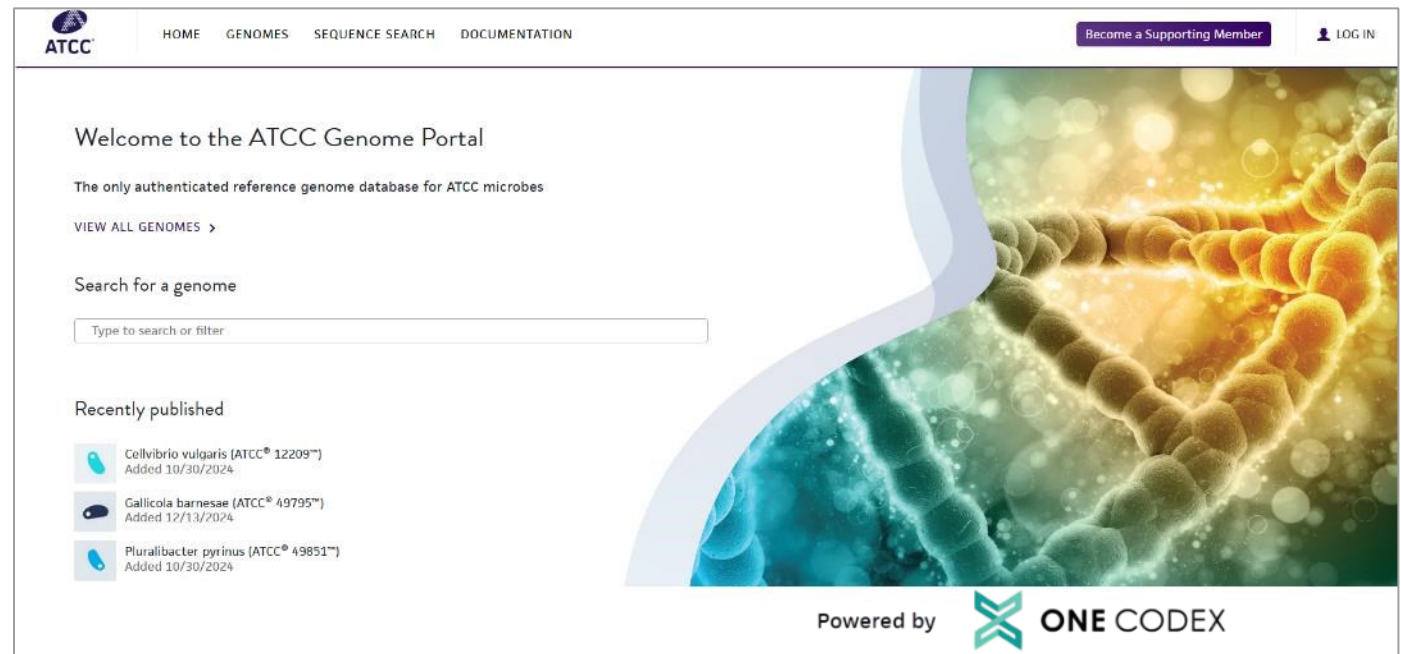
The ATCC Genome Portal (AGP) is a rapidly growing ISO 9001-compliant database of high-quality reference genomes from authenticated microbial strains in the ATCC collection. Customers can easily access and download meticulously curated whole-genome assemblies for purchased strains and *Supporting Members* have full access to the AGP.

5,750+

Available reference genomes

as of Aug 2025

- Download genome assemblies for ATCC microbes.
- Search for nucleotide sequences or genes within published genomes.
- Search for genomes by taxonomic name, taxonomic level, isolation source, ATCC catalog number, type strain status, and biosafety level.
- View genome assembly statistics and quality metrics.
- Identify the relatedness of published genomes by total genome alignment.



Learn more:

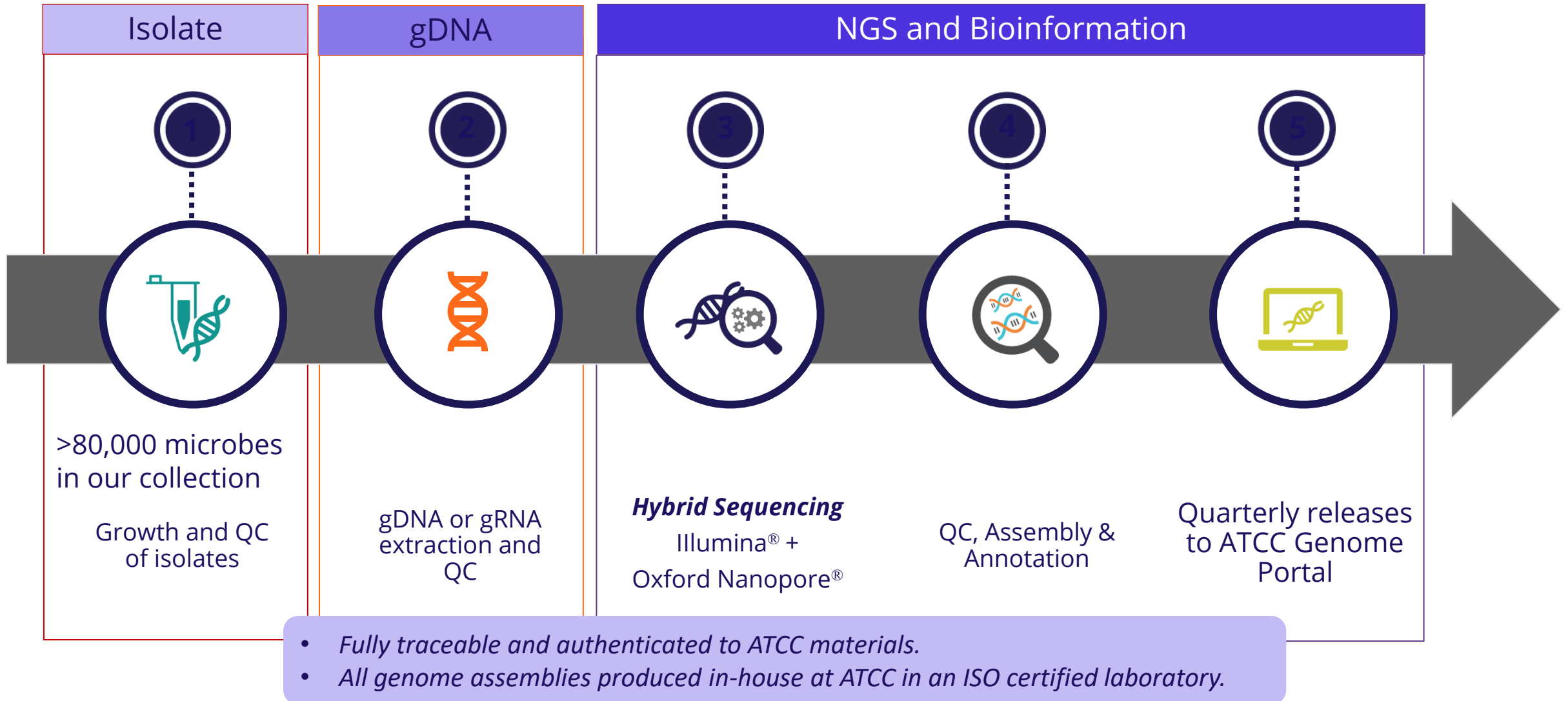


Visit the AGP:



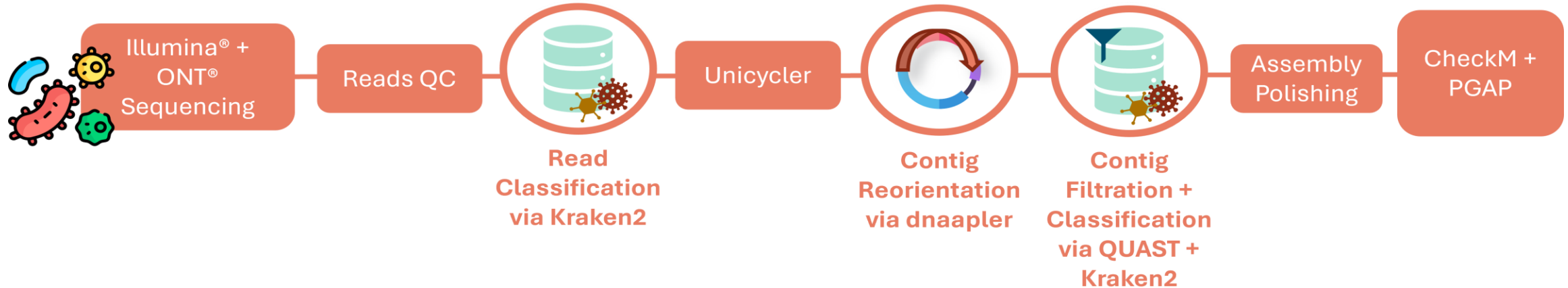
New genomes are released at the end of every quarter.

Authenticated physical material coupled with reference-quality genome sequences



Bacterial Genome Assembly

- All bacterial strains are sequenced on both sequencing platforms.
- NGS reads are trimmed and filtered, assembled using a pipeline built around *Unicycler*, and finally polished
- Assembly QC is based on CheckM
- Annotation is based on NCBI's PGAP pipeline
 - Q4, 2025 bacterial strains will also have additional annotations using ResFinder, AMRFinder and CARD.



Browse for data



HOME GENOMES SEQUENCE SEARCH DOCUMENTATION

Complete Collection

Bacteriology Collection

Mycology Collection

Protistology Collection

Virology Collection

Welcome to the ATCC Genome Portal

The only authenticated reference genome database for ATCC microbes

VIEW ALL GENOMES >

Search for a genome

Type to search or filter

Recently published

Oropouche virus (ATCC® VR-3446™)
Added 3/27/2025

Powassan virus (ATCC® VR-1958™)
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Dengue virus type 3 (ATCC® VR-3380™)
Added 2/21/2025

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Genomes

[All Genomes](#) My Genomes

Type to search or filter

Taxonomic Name	ATCC Product Name	Date Published	Length	Download	Genomic Data
☆ <i>Abiotrophia defectiva</i>	Type Strain ATCC® 49176™	December 12, 2022	2.0 Mb	Download	View
☆ <i>Abiotrophia defectiva</i>	ATCC® 700209™	April 29, 2024	2.0 Mb	Download	View
☆ <i>Acetivibrio aldrichii</i>	Type Strain ATCC® 49358™	September 25, 2024	6.4 Mb	Download	View
☆ <i>Acetivibrio cellulolyticus</i>	Type Strain ATCC® 33288™	November 26, 2024	6.3 Mb	Download	View
☆ <i>Acetivibrio cellulolyticus</i>	Type Strain ATCC® 35928™	March 27, 2025	6.3 Mb	Download	View
☆ <i>Acetivibrio ethanoligignens</i>	Type Strain ATCC® 33324™	June 3, 2024	4.1 Mb	Download	View
☆ <i>Acetivibrio thermocellus</i>	Type Strain ATCC® 27405™	August 27, 2019	3.8 Mb	Download	View
☆ <i>Acetobacter aceti</i>	Type Strain ATCC® 15973™	September 29, 2020	3.7 Mb	Download	View
☆ <i>Acetobacter aceti</i>	ATCC® 23746™	January 28, 2021	3.7 Mb	Download	View

ATCC Genome Portal: Reference Genome Details



- Example: *Acinetobacter baumannii* ATCC 19606

Overview page

ATCC

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Acinetobacter baumannii (ATCC® 19606™)

Overview Genome Browser Related Genomes Quality Control

DOWNLOAD ASSEMBLY

DOWNLOAD ANNOTATIONS

RUN DISCREPANCY REPORT

Assembly Summary

Date Published

May 14, 2019

Length

3,997,508 nt

Sequencing Technology

1

Illumina + Oxford Nanopore Hybrid Assembly

Number of Contigs

3

(All Circularized)

Assembly Level

1

Complete

N50

3,980,313 nt

%GC

39.15%

Organism Summary

Name

Acinetobacter baumannii

Isolation

Tags

Biosafety Level

Type Strain

Input Reads Summary

Oxford Nanopore Read Count

Oxford Nanopore Median Q Score

1

Illumina Read Count

Illumina Mean Coverage Depth

Illumina Median Q Score

Annotations Summary

Number of CDS

3,737

Number of Hypothetical Proteins

561

Number of tRNA

74

Number of 5s rRNA

6

Number of 16s rRNA

6

Number of 23s rRNA

6

Genome Browser

ATCC

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Include Hypothetical Proteins

Display All Genes

Filter annotations

Contig Start End Name Protein Product EC Number Type

1 1 1398 dnaA chromosomal replication initiator protein DnaA CDS

1 1496 2644 dnaI DNA polymerase III subunit beta 2.7.7.7 CDS

1 2659 3741 recF DNA replication/repair protein RecF CDS

1 3794 6262 gyrB DNA topoisomerase (ATP-hydrolyzing) subunit B 5.6.2.2 CDS

1 6300 6692 cybC cytochrome b562 YP_004996703.1

1 7335 6778 VTT domain-containing protein WP_001009196.1

1 9516 7585 ATP-binding cassette domain-containing protein WP_006081465.1

1 9773 10777 DUF6091 family protein YP_004996706.1

1 11033 12040 DUF6091 family protein WP_004745104.1

1 12383 13387 DUF6091 family protein YP_004996709.1

Annotation Legend

EC1 Oxidoreductases

EC2 Transferases

EC3 Hydrolases

EC4 Lyases

EC5 Isomerases

EC6 Ligases

EC7 Translocases

All Other CDS

Hypothetical Proteins

tRNAs

AMR Gene

View Quality Control Data

ATCC

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Quality control statistics on illumina sequencing data.

4/4

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100%

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Metrics assessing the assembly quality

3/3

3 out of 3 passed

Passed

Estimated genome completeness

99.63%

Passed

Estimated genome contamination

0%

Passed

Average depth of coverage

243.032x

Find Related Genomes

ATCC

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Acinetobacter calcoaceticus/baumannii complex > *Acinetobacter baumannii*

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Most similar genomes

The following genomes have the greatest genomic similarity to this one (~95% average nucleotide identity).

Acinetobacter baumannii (ATCC® 19187™)

99.99% similar

4 contigs
4.0 Mb

View Genome

Acinetobacter baumannii (ATCC® 15308™)

99.99% similar

5 contigs
4.0 Mb

View Genome

Acinetobacter baumannii (ATCC® 17961™)

99.55% similar

5 contigs
4.0 Mb

View Genome

Acinetobacter sp. (ATCC® 14293™)

98.07% similar

3 contigs
3.8 Mb

View Genome

Acinetobacter baumannii (ATCC® BAA-2871™)

98.04% similar

2 contigs

View Genome

Acinetobacter baumannii (ATCC® BAA-2894™)

98.04% similar

12 contigs

View Genome


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Fast Sequencing Search

<https://genomes.atcc.org/sequence-search>



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Search for a genome

CTGCTAAGGTTAAAAGAGAACCGGAACCTGTTGCTAATACTGCAGTTAGTTCTAAGAGTTCA
AAAAAGAACTATTAAATCCACAATTACTTTTCTACTATTGTTGAAGGCCGTTCTAACCA
AATGGCAGCAGAAACCTGTAGAAAAGTATTACACAGTTAGGTGCTTCTCAACATAACCCCTT
TGTTTTATATGGCCCGACAGGTCTAGGTAAGACTCACTTAATGCAAGCAGTTGGTAATGCC
TTACTGCAAGCGAAGCCGAATGCAAGAGTCATGTATGACTTCAGAAAGTTTTGTACAAGA
TTTTGTGAGCTCATTACAAAAGGAAAGGTTGAAGAGTTTAAGAAAAATGTCGTTCTTAG
ACTTGTATTAGTAGATGATATTCATCTTTTGGCAGGGAAGAAGCAAGTCTTGTGAATTT
TTCTATACATTTAATGCCTTACTATGCAATGATGAATCTAAACAAATATTTTAACGTCAGAT
CGATATCCTAAAGAATTAACAGAACTTGATCCTCGTTTGGTTTTCTCGTTTTCTGGGGGCT
ATCAGTAGGTGTTGAACCACCTGATATTGAAACTCGAATCGAAATTCGCTTAAAAAGCTG
AAAATAGTGCGTTGATTACCTAGAAACTGTGCGTTGTTATTGCCCAACAGTCGTAGCG
AACGTACGTGAACCTGAGGGTGCACCTGAATAAAGTTGTCGAATTTACGTTTTAAAGGTGC
TCCAATTGATCTTGATGTCGTACGGGAATCTTTAAAGATGTTTTAGCGATCCGTGCTCGTA
CAATTAGTGTAAGAAATATCCAGCGTGTAGTGAGTGAATATTTCCGAATTCATTAAAGAG
CTGGTAGGTCCAAAGCGTACCCGAATTTATGCTCGACCACGTCAGTTGGCGATGGGGCTTG
CCGTGAATTAACGGGGGATAGTTTTCTGAAATTGGAATGGCTTTTGGTGGCGGTGATCACA
GTACAGTGATGCATGCTTGTGAAAAAGTCGTAGTTTACGGGAAGAAGACCAATCTTTGAT
GAAGATTATAAGAACCTATTACGTTTGCTTCAAAGTTAA

Bases that match the genomic sequence of a genome published on the portal are highlighted in gray. Upon rollover, bases that match the genomic sequence of a genome in the search results are highlighted in an additional color.

Search

Results on 1403 bases

Acinetobacter baumannii (ATCC® 19606™)

1398 bases matched (100.00%)

3 contigs
4.0 Mb

View Genome

Acinetobacter baumannii (ATCC® 19187™)

1398 bases matched (100.00%)

4 contigs
4.0 Mb

View Genome

Acinetobacter baumannii (ATCC® 17961™)

1398 bases matched (100.00%)

5 contigs
4.0 Mb

View Genome

Acinetobacter baumannii (ATCC® BAA-2887™)

1395 bases matched (99.00%)

3 contigs
4.0 Mb

View Genome

Search results are almost instantaneous!

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ATCC Genome Portal: Reference Genome Details



- Example: *Acinetobacter baumannii* ATCC 19606

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ATCC

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All Other CDS

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tRNAs

AMR Gene

Contig	Start	End	Name	Protein Product	EC Number	Type
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1	1496	2644	dnaII	DNA polymerase III subunit beta	2.7.7.7	CDS
1	2659	3741	recF	DNA replication/repair protein RecF		CDS
1	3794	6262	gprB	DNA topoisomerase (ATP-hydrolyzing) subunit B	5.6.2.2	CDS
1	6300	6692	cybC	cytochrome b562		CDS
1	7335	6778		VTT domain-containing protein	WP_001009196.1	CDS
1	9516	7585		ATP-binding cassette domain-containing protein	WP_006081465.1	CDS
1	9773	10777		DUF6091 family protein	YP_004396706.1	CDS
1	11033	12040		DUF6091 family protein	WP_004745104.1	CDS
1	12383	13387		DUF6091 family protein	YP_004396709.1	CDS

View Quality Control Data

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Acinetobacter calcoaceticus/baumannii complex > *Acinetobacter baumannii*

Acinetobacter baumannii (ATCC® 19606™)

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Acinetobacter baumannii (ATCC® BAA-2894™)

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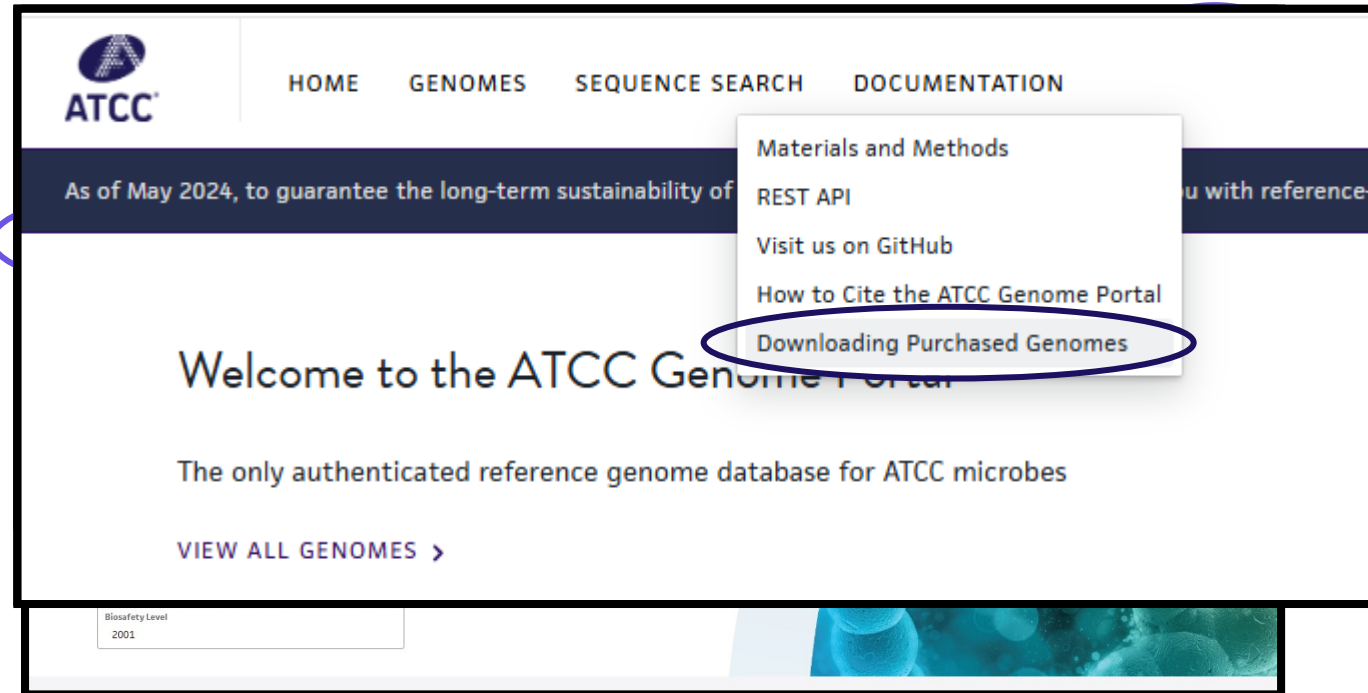
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Download genome assemblies and annotations	Only for purchased products	All products	All products	All products
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		\$600/\$1,800	\$2,400/\$7,200	Inquire

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Priority AMR Strains Brochure
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