

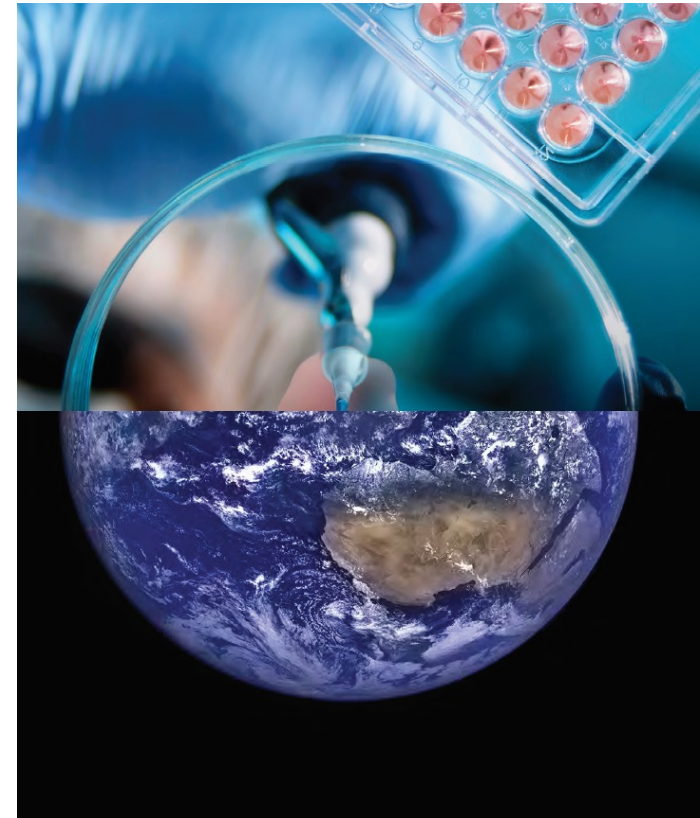
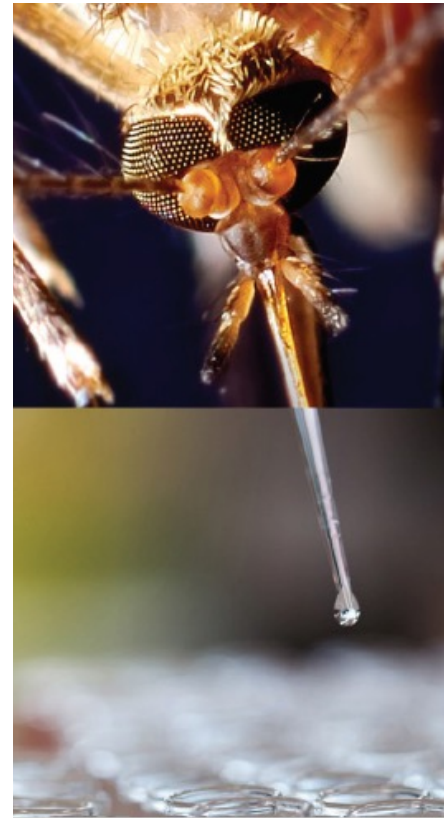
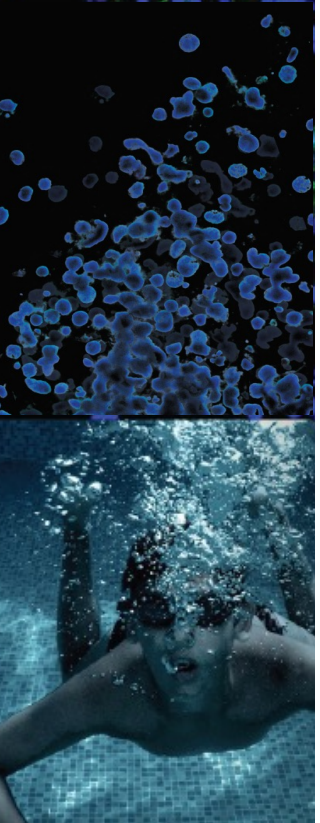


BEI Resources

Supporting the Infectious Disease
Research Community

Marco A. Riojas
Senior Scientist, Bacteriology
ATCC

Credible Leads to Incredible®



Outline

- Who is ATCC?
- What is BEI Resources?
- BEI Resources
 - Catalog
 - Deposits
 - Registration
- ATCC Collection

About ATCC

An established partner with government, academia, and industry

HISTORY

- Non-profit founded in 1925, providing the world's scientific community with high-quality biomaterials (e.g., cells, bacteria, viruses) and repository operations
- Relocated to Rockville, MD in 1963; expanded to Manassas, VA in 1998
- Support to federal government programs for >50 years focused on global health, clinical study support, and biodefense

PEOPLE

- >700 employees

FACILITIES (in Manassas, Va. and Gaithersburg & Germantown, Md.)

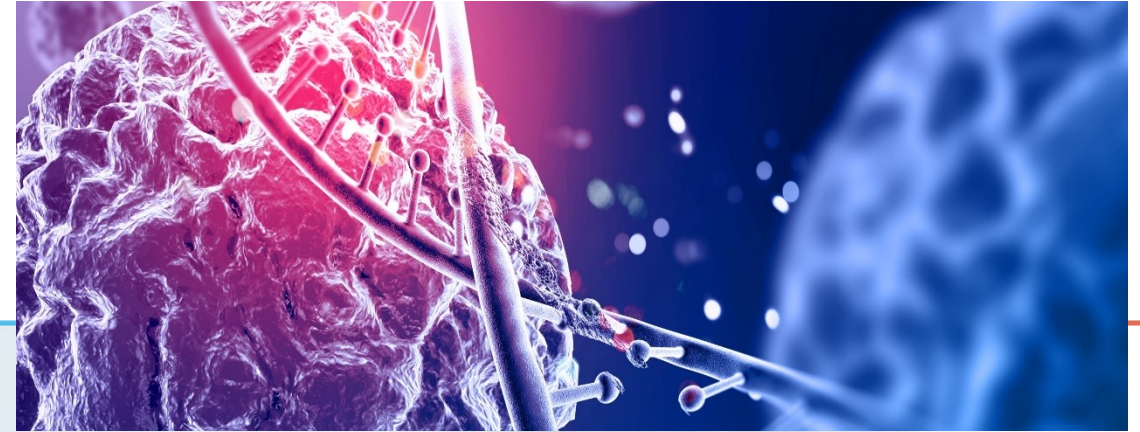
Manassas	Gaithersburg	Germantown
170,000 ft ²	46,000 ft ²	52,000 ft ²
BSL-3	BSL-2	BSL-2

- ~76,000 ft² laboratory space with dedicated microbiology, virology, and clinical sample processing suite & ~32,600 ft² repository space



“ ATCC supports global health security and serves as a **national resource** to our nation's public health infrastructure. ”

ATCC Federal Solutions *Focus Areas*



GLOBAL HEALTH

- Emerging Infectious Diseases
- Pandemic Response
- Medical Countermeasure Development
- Production and distribution of surveillance kits
- Biological Select Agents and Toxins (BSAT) Acquisition, Characterization, Manufacture, and Distribution



CLINICAL STUDY SUPPORT

- Collection Kit Development and Distribution
- Worldwide Shipping, Logistics, and Permits
- Sample Tracking/processing
- Short- and Long-term Storage
- Vaccine, diagnostics, and therapeutic development support



BIOLOGICAL RESOURCE SUPPORT

- Biorepository Operation and Management
- Acquisition and characterization
- Sequencing services
- Molecular biology and genetic engineering

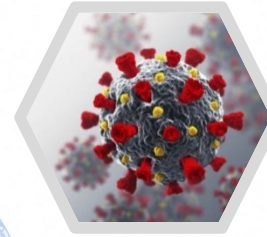
Key Federal Contracts

NIAID: BEI Resources Program (BEI-RRP)



Biorepository resource program focused on acquisition, authentication, and production of reagents for researchers worldwide - including Category A, B, and C priority pathogens, emerging infectious disease agents, HIV reagents and pathogens, non-pathogenic microbes and other microbiological materials used in R&D of improved diagnostic tests, vaccines, and therapies.

CDC: International Reagent Resource (IRR)



Provides global users with reagents, tools and information for studying and detecting influenza viruses and other bacterial and viral pathogens – including SARS-CoV-2 – while supporting CDC's Global Health Security Agenda and supporting emergency responses.

NCI: Central Repository



As a part of Frederick National Laboratory for Cancer Research (FNLCR), ATCC manages and operates the repository under subcontract from Leidos Biomedical Research. The repository houses more than 18 million research biospecimens. ATCC receives, stores, and distributes biospecimens to clinical investigators supporting cancer research, facilitates study logistics, operates the facility, ensures the safety of staff, and maintains the quality system.

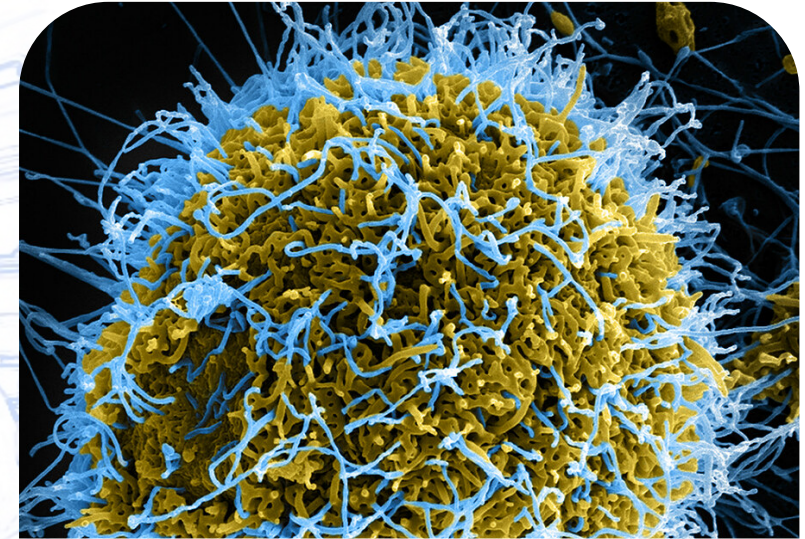
BARDA: Biological Specimen and Investigational Products (BSIP)



Support ASPR/BARDA's Clinical Studies Network (CSN) by providing a comprehensive archive solution for biospecimens collected as part of clinical trials or in the development of medical countermeasures (MCMs) for chemical, biological, radiological, and nuclear (CBRN) threats, influenza and emerging infectious diseases.

BEI Resources

- BEI Resources was established by the National Institute of Allergy and Infectious Diseases (NIAID) to provide reagents, tools, services, and information related to the NIAID research portfolio.
- Priority infectious diseases supported by BEI Resources include:
 - Category A, B, and C priority pathogens
 - Emerging infectious diseases
 - HIV/AIDS
 - Non-pathogenic microbes



NIAID Biodefense and Emerging Infectious Disease Pathogens

Bacteria

- Antimicrobial Resistant (AMR) strains
- *Bacillus anthracis* (anthrax)
- *Bordetella pertussis*
- *Borrelia mayonii*
- *Borrelia miyamotoi*
- *Brucella* species (brucellosis)
- *Burkholderia mallei* (glanders)
- *Burkholderia pseudomallei* (melioidosis)
- *Campylobacter jejuni*
- *Chlamydia psittaci* (psittacosis)
- *Coxiella burnetii* (Q fever)
- *Ehrlichia*
- Diarrheagenic *Escherichia coli*
- *Francisella tularensis* (tularemia)
- *Leptospira*
- *Listeria monocytogenes*
- *Rickettsia prowazekii* (typhus fever) and other Rickettsias
- *Salmonella*
- *Shigella*
- Tuberculosis
- Pathogenic Vibrios
- *Yersinia enterocolitica*
- *Yersinia pestis* (plague)

Viruses

- Alkhurma virus
- Cache Valley virus
- Caliciviruses
- California encephalitis virus
- Chapare virus
- Chikungunya virus
- Crimean-Congo hemorrhagic fever virus
- Dengue virus
- Eastern equine encephalitis virus (EEE)
- Ebola virus and viruses causing Ebola disease
- Enterovirus D68
- Enterovirus A71
- Guanarito virus
- Hantaviruses causing Hanta Pulmonary syndrome
- Heartland virus
- Hendra virus
- Hepatitis A virus
- Influenza viruses
- Japanese encephalitis virus (JE)
- Junin virus
- Kyasanur Forest virus
- LaCrosse encephalitis virus (LACV)
- Langya virus
- Lassa virus
- Lujo virus
- Lymphocytic Choriomeningitis virus
- Machupo virus
- Marburg virus
- Mayaro virus
- Nipah virus
- O'nyong-nyong virus
- Omsk hemorrhagic fever virus
- Oropouche virus
- Poliovirus
- Powassan/Deer Tick virus
- Punta Toro virus
- Rabies virus
- Rift Valley Fever virus
- St. Louis Encephalitis virus (SLEV)
- Severe acute respiratory syndrome associated coronavirus (SARS-CoV), SARS-CoV-2, MERS-CoV, and other highly pathogenic human coronaviruses
- Severe Fever with Thrombocytopenia Syndrome virus (SFTSV)
- Tickborne encephalitis viruses
- European subtype
- Far Eastern subtype
- Siberian subtype
- Variola major (smallpox) and other related poxviruses (including Monkeypox)
- Venezuelan equine encephalitis virus (VEE)
- West Nile virus (WNV)
- Western equine encephalitis virus (WEE)
- Yellow fever virus (YFV)
- Zika virus

Fungi/Protists

- *Coccidioides*
- *Microsporidia*
- *Mucorales*
- *Protozoa*
- *Balamuthia mandrillaris*
- *Cryptosporidium parvum*
- *Cyclospora cayetanensis*
- *Entamoeba histolytica*
- *Giardia lamblia*
- *Naegleria fowleri*
- *Toxoplasma gondii*

Toxins/Other Infectious Agents

- *Clostridium botulinum* toxin (botulism)
- Epsilon toxin (*Clostridium perfringens*)
- Prions
- Ricin toxin (*Ricinus communis*)
- *Staphylococcus enterotoxin B* (SEB)

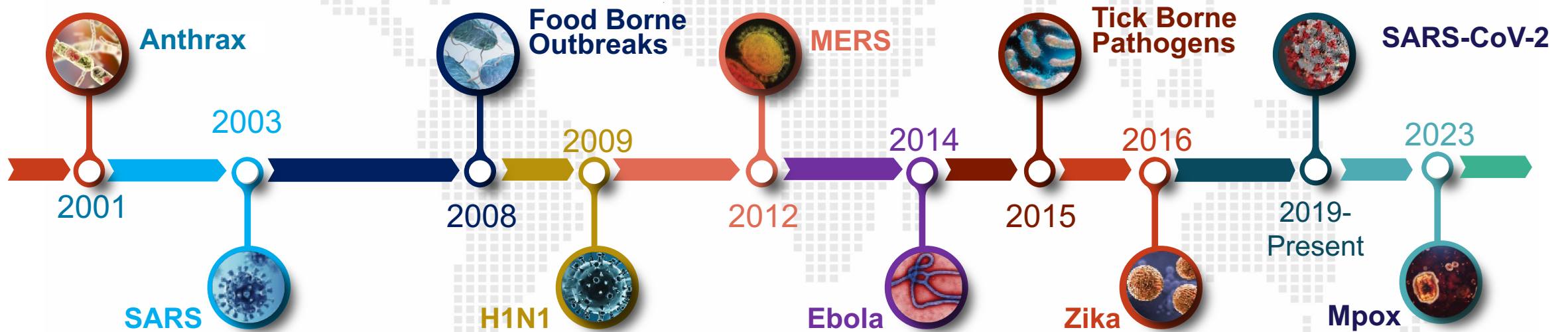
BEI Resources

- BEI Resources has been managed under contract by American Type Culture Collection (ATCC) since 2003. A seven-year contract to continue managing BEI Resources was awarded to ATCC in October 2023. In January 2024, the scope of BEI Resources expanded to include the research materials and services previously provided through the NIH HIV Reagent Program.



BEI Resources

Strong pandemic response capabilities in service to global health needs for over 20 years



SARS-CoV-2 Response

Since **JANUARY 2020**, **BEI Resources** with **NIAID**

has created a comprehensive catalog of strains and related reagents to **support COVID-19 research** and **development** efforts.

To date, BEI Resources has provided

MORE THAN
190,000
VIALS OF SARS-COV-2

and related coronavirus strains and reagents to **OVER 3,500** **RESEARCHERS**

At 1,860
INSTITUTIONS in more than **77** **COUNTRIES.**



BEI RESOURCES has acquired, produced, and distributed

MORE THAN

140

STRAINS AND VARIANTS OF



SARS-CoV-2,

and worked with vaccine developers to support efficacy studies against emerging variants,

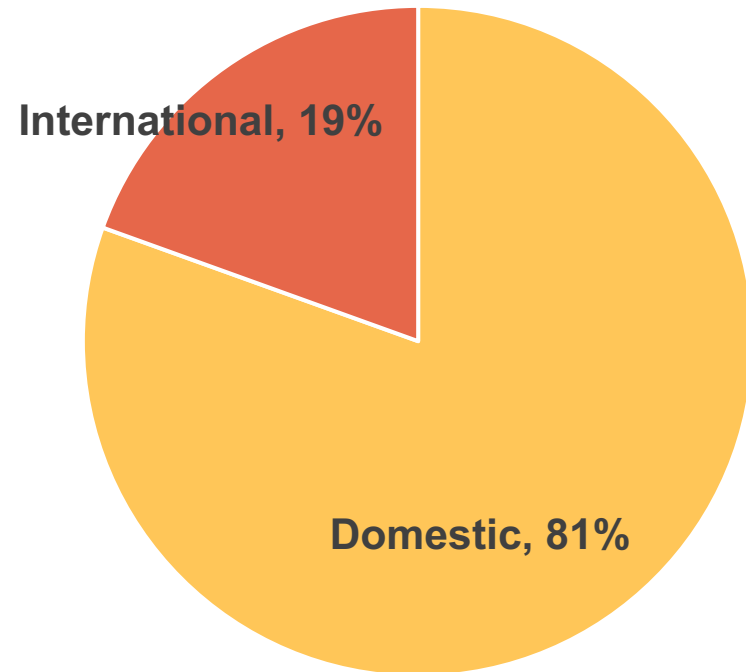
and propagated over 100L of virus to support

CHALLENGE STUDIES for vaccine and therapeutic development.

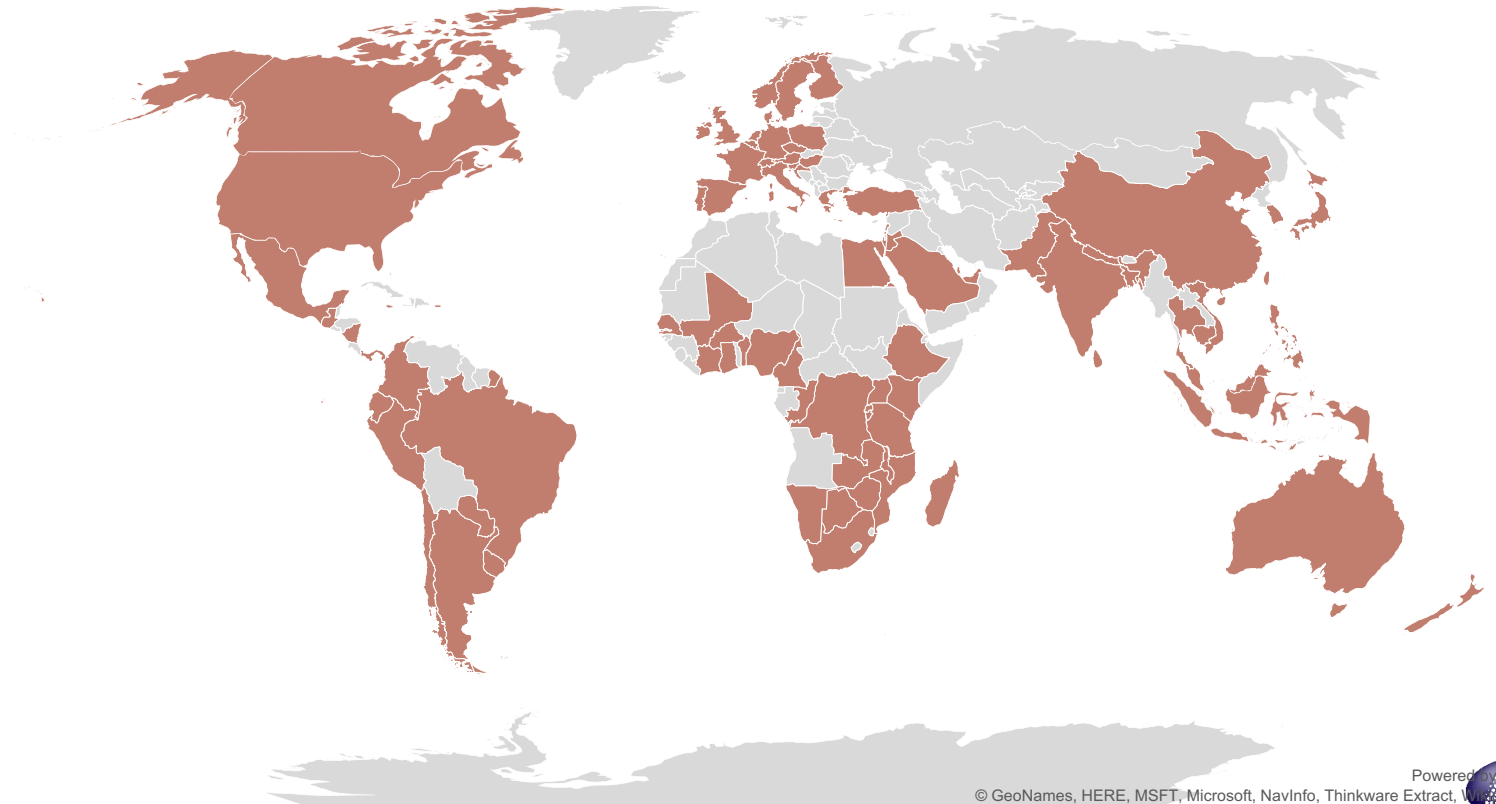



Global Shipment Outreach

Orders Shipped
Domestic vs. International
CY1



- Shipments to 56 Countries in CY1 (through March 2024)
- Shipments to 125 Countries since 2003

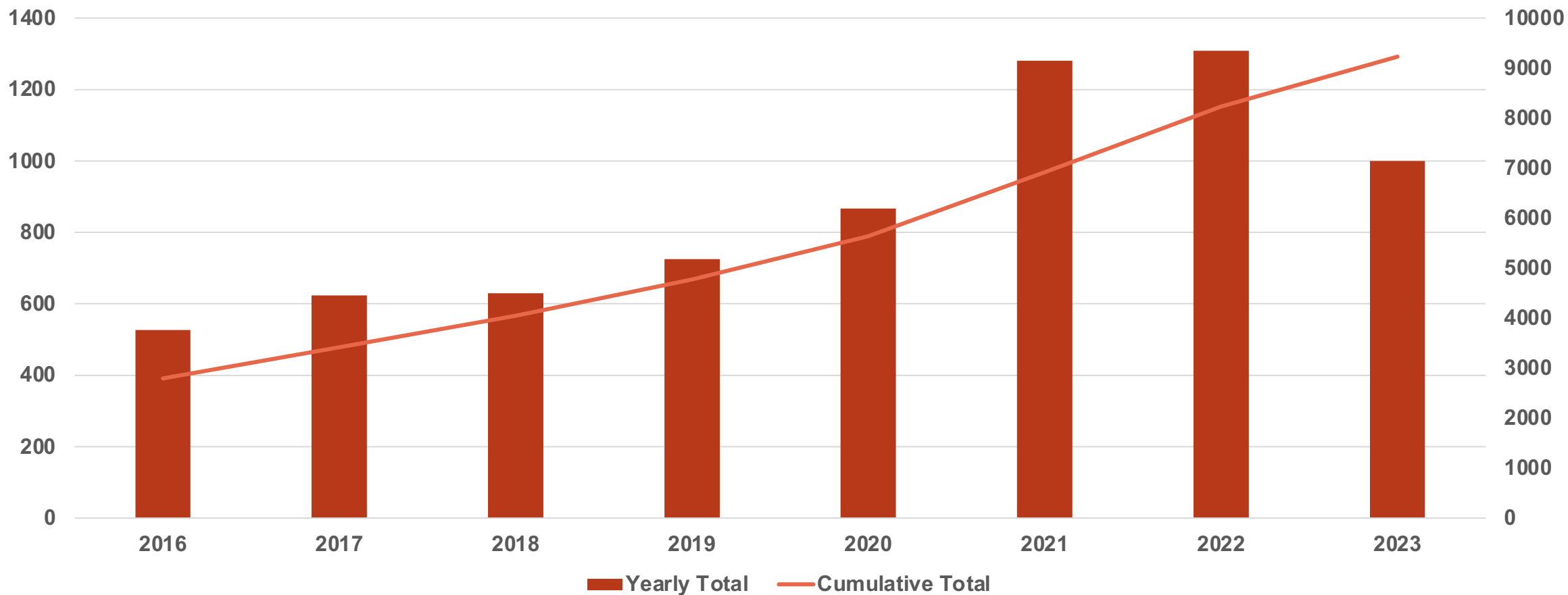


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Citations

Over 6,900 citations in the last 8 years


BEI Resources Citations




BEI Resources Website



SUPPORTING INFECTIOUS DISEASE RESEARCH

NIH supported program managed by  **ATCC**

 [Advanced Search](#) [Login](#)

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Choose an Organism ▼

Welcome Members of the **HIV Research Community!**


We are pleased to welcome new registrants from the HIV community and to announce the incorporation and availability of HIV reagents within the BEI Resources catalog. As an approved BEI Resources registrant, not only will you be able to access HIV reagent materials, but you will also have access to the BEI Resources catalog (over 12,800 research reagents, subject to registration eligibility).


Members of the **HIV Research Community**, please [click here](#) for additional information and resources to assist with accessing HIV materials.





Welcome to BEI Resources


At BEI Resources, we're the leading source for high quality cultures and reagents for microbiology and infectious diseases research. As you explore the benefits we offer, you will see how BEI Resources can serve as a catalyst for your research efforts worldwide. **BEI Resources materials are provided at no cost to registered researchers (additional shipping charges may apply).** We'll take care of the details - so you can focus on your research.



 HIV Reagent Program



 NIH/NIAID



 How to Register



 How to Order



 How to Cite



 Quick Order



 Forms



 Publications



 Suggest A Reagent



 Schedule of Events



 Knowledge Base



 BEI Science



 FR3



 MR4



 Vector Resources



 SR3 (Schistosomes)

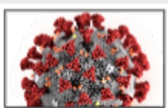

 CDC & FDA ARISOLATE BANK



 ARLG Strains

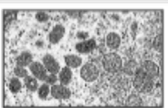

 HMP



 CEIRS

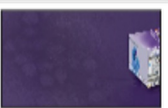

 Welcome to BEI Resources


 SARS-CoV-2 and currently available


 The NIAID Data Ecosystem Discovery


 Mpox virus Reagents Available


 20 Years of BEI Resources


 2023 BEI Arthropod Vectors Webinar_Part 1



Catalog

NARROW YOUR SEARCH

All Resources

CATEGORY

- Antigen Preparations (190)
- Antimicrobial Compounds... (59)
- Assays or Panels (32)
- Bacteria (4084)
- Bacteriophages (57)
- Cell Banks (169)
- Cell Lines - Infected (55)
- Cell Lines - Uninfected (207)

AVAILABILITY

BIOSAFETY LEVEL

- Level 1 (6261)
- Level 2 (5948)
- Level 2+ (28)
- Level 3 (1814)

VECTOR INFORMATION

- Mosquitoes (109)
- Reduviids Triatomes (2)
- Sand Flies (12)
- Snails (44)
- Ticks (12)
- Tsetse Flies (3)

ROLE

- BEI Level 1 (6267)
- BEI Level 2 (5950)
- BEI Level 3 (1834)

Catalog

A variety of research materials are available to scientists online.

Enter Keywords or Item Number:

Please Note: Made To Order and Discontinued items may not appear in your search, please select the "Made To Order" and/or "Discontinued" filters.

Sort by: Best Match

Showing 1 to 20 of 14051 Results

<input type="checkbox"/>	NR-1 Vaccinia Virus Modified Vaccinia Ankara Viruses		
<input type="checkbox"/>	NR-3 <i>Escherichia coli</i> EDL931 (Serotype O157:H7) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-4 <i>Escherichia coli</i> H10407 (Serotype O78:H11) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-5 <i>Escherichia coli</i> E2539-C1 (Serotype O25:K98:NM) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-6 <i>Escherichia coli</i> B6914-MS1 (Serotype O157:H7) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-7 <i>Escherichia coli</i> EDL932 (Serotype O157:H7) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-8 <i>Escherichia coli</i> A (Serotype O157:H7) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-9 <i>Escherichia coli</i> 94-G7771 (Serotype O157:NM) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-10 <i>Escherichia coli</i> BDMS 770 (Serotype O157:H7) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-11 <i>Escherichia coli</i> EDL933 (Serotype O157:H7) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-12 <i>Escherichia coli</i> RIMD 0509952 (Serotype O157:H7) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-13 <i>Francisella tularensis</i> subsp. <i>novicida</i> Utah 112 Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-14 <i>Francisella tularensis</i> subsp. <i>holarctica</i> 15 (Gaisky Live Vaccine Strain) Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-15 <i>Yersinia pestis</i> A1122 Bacteria	BEI Level 2	
<input type="checkbox"/>	NR-17 <i>Yersinia pestis</i> TWJ Bacteria	BEI Level 2	

- Bacteria Select Agents and Near Neighbor
- Other Bacteria
- Dalrymple-Peters USAMRIID Antibodies
- Ferret Reagents
- Filariasis Resources
- Food and Waterborne
- Fungi
- Human Microbiome Project
- HIV Reagent Program
- Leprosy Research Support
- Influenza Resources
- Innate Immunity
- MR4-Malaria Resources
- Mycoplasmas
- Mycobacterium
- NAPSA

- Abrin
- Acanthamoeba sp.
- Acinetobacter sp.
- Anaplasma sp.
- Arboviruses
- Arenaviruses
- Arthropod Vectors
- Aspergillus sp.
- Babesia sp.
- Bacillus sp.
- Bartonella sp.
- Bacteroides
- Borrelia sp.
- Bordetella sp.
- Brucella sp.
- Brugia sp.

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Catalog ▾ Search Choose a Resource ▾ Choose an Organism ▾

[Deposits](#) » [Deposit Information](#)

► [Deposit Information](#)

- [Deposit Forms](#)
- [Compliance](#)
- [Resource Links](#)
- [Contact Us](#)
- [Knowledge Base \(FAQs\)](#)

Deposit Information



BEI Resources is working to build a comprehensive resource of organisms and reagents for the research community. BEI Resources would like to offer the scientific community an opportunity to participate in building this resource by depositing material within the resource. Depositing with BEI Resources can provide several advantages and services for researchers and their institutions:

- Promotes access and use of the materials.
- Relieves researchers of the burdens of distributing materials.
- Offers an alternative to institutions for secure storage of biological materials.
- Ensures regulatory compliance in shipping.
- Protects intellectual property of the depositor.

If you are interested in making a deposit or would like more information, please contact us by completing the form below. BEI Resources will provide assistance with shipping and regulatory questions if needed. In addition, we ask that you submit [Deposit Forms](#) to indicate your desired distribution and ownership rights for the material as well as any background scientific information you can provide. Please do not send materials without Deposit Forms.

For more information about depositing into the Human Microbiome Project, [click here](#).

Deposit Information

* Required Fields

Deposit Inquiry Contact Form

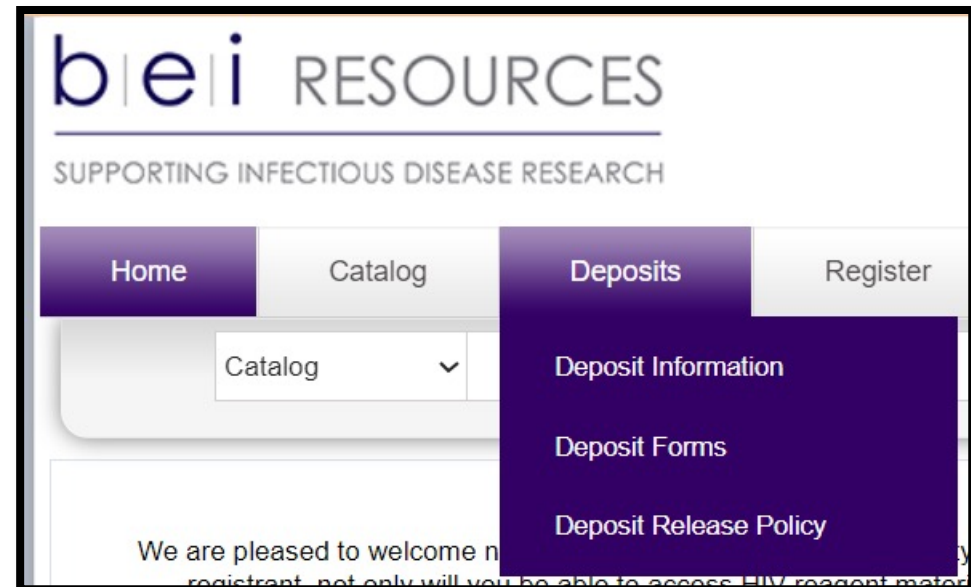
Name:

*

Acquisition Process Overview



- ATCC acquires materials for BEI Resources through commercial vendors, individual researchers, institutions, and government entities by utilizing our internally developed process.
- Visit our [website](#) to submit a suggested reagent request or a request to deposit material with our program



Home Catalog Deposits **Register** [Help](#) [About](#)

Catalog Choose a Resource Choose an Organism

Register

Register
Register Level 1
Register Level 2
Register Level 3
Upgrade Registration
Registration Forms
Eligibility
NIAID
Resource Links
Contact Us
Knowledge Base (FAQs)

Register



Registering with BEI Resources

BEI Resources acquires, authenticates, produces and distributes a variety of materials within several Biosafety Levels and classifications. We understand that some researchers may only choose to order non-infectious research grade reagents through BEI Resources. BEI Resources has four Levels of registration. Review the registration Levels and select the one that facilitates your scientific research. BEI Resources will also accept Institutional Registrations. For more details on each level of registration, use the links below.

[Level 1 — Non-infectious Research Grade Reagents](#)

BEI Resources Level 1 registration is for Non-infectious Research Grade Reagents which are Biosafety Level 1. If you would like to register to receive these materials ONLY, [select this link](#).

This registration does not include access to Level 2 or Level 3 materials.

[Level 2 — Pathogen or Permit Related Items](#)

BEI Resources Level 2 registration is for receiving Pathogen or Permit-related items which require Biosafety Level 2 rated laboratory space. This Level does not include Select Agents. Registration for these items requires additional information. If you are registering to receive pathogen- and/or permit-requiring materials, [select this link](#).

This registration also includes access to Level 1 materials. This registration does not include access to Level 3 materials.

[Level 3 — Select Agent and Biosafety Level 3 Items](#)

BEI Resources Level 3 registration is for Select Agents and items requiring Biosafety Level 3 rated laboratory space. Registration for these items requires extensive laboratory descriptions and proof of eligibility from the Centers for Disease Control (CDC) and/or USDA to receive these items. If you are registering to receive Biosafety Level 3 items and/or Select Agents, [select this link](#).

Materials are distributed only to established qualified research laboratories with facilities and safety programs appropriate for the level of material requested.

Reagent Use by Approved Registrants

- All the BEI-RRP registrants will sign a [Material Transfer Agreement](#) (MTA) upon registration which protects the depositor's rights.
- Every user must acknowledge these terms and conditions during the checkout process for every order.
- The MTA is available on the [website](#).

biei RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

**INDIVIDUAL
MATERIAL TRANSFER AGREEMENT**

This BEI Resources Material Transfer Agreement ("BEI Resources MTA") is between the RECIPIENT and the American Type Culture Collection ("ATCC®"), a not-for-profit organization having its offices at 10801 University Blvd. Manassas, Virginia 20110 which, in its capacity as contractor to the National Institute of Allergy and Infectious Disease ("NIAID"), an Institute of the National Institutes of Health ("NIH"), an agency of the U.S. Department of Health and Human Services ("HHS"), is managing BEI Resources. BEI Resources is a U.S. Government-funded program, which is separate and distinct from other collections at the ATCC.

TERMS AND CONDITIONS

DEFINITIONS

COLLABORATOR: Any third party, other than a CONTRIBUTOR, collaborating with RECIPIENT on a project funded by the same U.S. Government grant, cooperative agreement or contract as RECIPIENT, for the purpose(s) and during the term of that funding agreement, provided that party is also registered with ATCC for access to BEI Resources and has executed a BEI Resources MTA and INTER-REGISTRANT TRANSFER AGREEMENT for that MATERIAL.

biei RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

Home Catalog Deposits Register HIV

Catalog

Forms

- Forms
- Suggest a Reagent
- New Released Reagents
- Compliance

Registration Information

Registration Forms

Upgrade Registration

Eligibility

Registration FAQs

Contacting BEI



www.beiresources.org



contact@beiresources.org



Toll-free: (800) 359-7370

8:30 AM to 4:30 PM Eastern Time, M-F

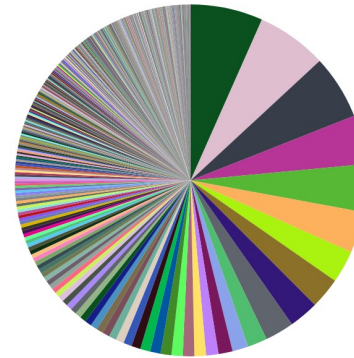
TTY: (703) 365-2727 (for deaf, hard of hearing, or speech impaired)

b | e | i RESOURCES
SUPPORTING INFECTIOUS DISEASE RESEARCH

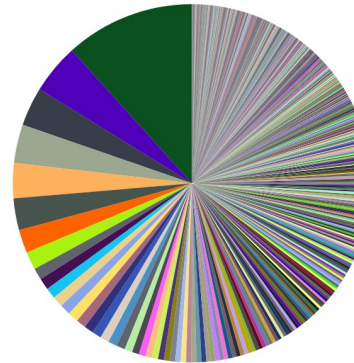


ATCC's Comprehensive Collection of Microbes

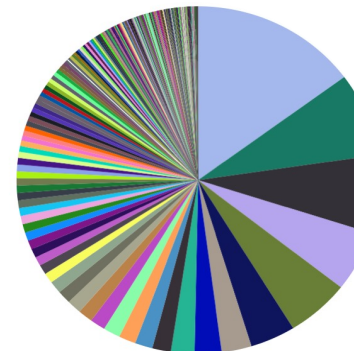
- Comprehensive microbial collection with enhanced authentication
 - 70,000+ bacteria, fungi, viruses, and protozoa
 - Over 1,300 microbial type strains
- Brand recognition
 - Organizations and regulatory agencies specify ATCC® cultures in their standards and guidelines
 - USP, ISO, FDA, CLSI, USDA, ASTM, AOAC, WHO
 - Over 475 reference strains recommended for use in quality control
- ATCC® has live microbes and derivatives, including inactivated materials and nucleic acids
- ATCC® uses a variety of advanced techniques to characterize and authenticate biomaterials—no single method of identification is sufficient



Bacteriology
1226 genera



Mycology
1864 genera



Virology
200 genera

Microbial Strain Authentication



Advancing authentication through credible standards combined with robust next-generation sequencing workflows

- Genotypic & Phenotypic Analysis
 - Whole-genome sequencing (ATCC Genome Portal)
 - 16S rRNA and ITS region sequencing
 - MALDI-TOF MS
 - Toxinotyping
- Phenotypic Analysis
 - Colony morphology
 - Cell attributes
 - Biochemical analysis
- Functional Analysis
 - Serotype
 - Drug resistance
 - Virulence

ATCC uses a variety of advanced techniques to characterize and authenticate biomaterials—no single method of identification is sufficient. Researchers look to ATCC for a wide range of authentication resources to safeguard reproducibility and meet requirements for funding, publication, and quality control.



Thank you!