



BRADBURY

SCIENCE

museum

## *Building Immunity: How fighting HIV and other viruses helps us understand our immune system.*

*Building Immunity* is a unique opportunity to journey through the history and development of your immune system.

Our interactive touch table invites each user to choose their own, unique experience as they learn about how fighting HIV and other viruses helps researchers understand how our own immune systems work to keep us healthy.

From the Bradbury Science Museum of Los Alamos National Laboratory, the exhibit presents remarkable insight into one of the most ancient and well-traveled organisms on the planet, viruses. Viral epidemics like the H1N1 flu, which killed over 40 million people in 1918, devastate communities around the world and destabilize regions around the globe. Additionally, their ability to mutate quickly creates a “Red Queen” effect, or loop of treated and then treatment-resistant strains of deadly diseases.

Increased understanding of the relationships between viruses and our own immune system is crucial to the development of improved treatments and novel vaccines and this research is happening right now at Los Alamos National Laboratory.

Thanks to advanced supercomputing facilities hosted at LANL, Betty Korber and team were able to use sequences collected in the HIV Sequence Database to represent global diversity and publish the first concept of a [mosaic vaccine](#).

### *Who are our partners for Building Immunity?*

Los Alamos National Laboratory, Theoretical Biology and Biophysics group.

### *Interesting facts:*

- Walter Reed discovered the first human virus, yellow fever virus, in 1901.
- Viruses are microscopic particles that contain genetic material and need living cells to replicate.
- Throughout evolution, viruses have jumped across species, constantly adapting to new hosts.
- Today, 10% of our DNA comes from ancient viruses that infected our ancestors millions of years ago, and their genetic material has become part of ours.

### *Requirements*

- Compact exhibit needs only 12' x 10' of space
- Ships in one ATA travel case
- Sets up in 30 minutes
- Needs only one standard electrical outlet
- Includes promotional materials to help advertise it at your location
- Includes educational activity suggestions

Contact us to schedule this exhibit to your location!

# Building Immunity

## Set-up and Dismantle Instructions



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# Building Immunity

## Exhibit Components

(1) Road case containing touch table and collateral materials

- Ideum touch table (1)
- Key set to access install program (1)
- Exhibit banner (1)
- Anti-static cloth for exhibit and screens (1)
- Packing foam, velcro, and bubble wrap

## Exhibit Installation (REQUIRES 4 people)

1. Identify location for installation.
2. Bring case to installation site.
3. Mark floor with tape to identify where you will place the exhibit.
4. Unlock case.
5. With two people, lift top of case straight up and then over, carefully clearing the touch table and screen. You will need to wiggle it a bit as the case is lined with foam to protect the touch table.
6. With four people, lift table and push case bottom out.
7. Plug into outlet. Please be sure to safely cover the power cord to avoid creating a tripping hazard.

## Exhibit Start-up and Use

1. Using keys, open access panel and push start button.
2. On main screen, double click Bradbury folder, then double click Bradbury test.
3. When dialogue box appears, select Play. Program should begin and viruses should begin floating across the screen.
4. Touch screen to “capture” a virus and bring it to dock.
5. To return to desktop screen, swipe from left.

## Version Installation

1. See Installing and Exiting the Building Immunity Application document.

## Exhibit Dismantle

1. Bring travel case to exhibit.
2. Turn power off and unplug touch table, wrapping power cord in table base, below computer.
3. Lift table onto travel case bottom.
4. Repack collateral, including tangibles and keys, and lightbox, secure with velcro.
5. Lift travel case top over touch table and lower down onto case bottom. This may take some gentle wiggling as the case is lined with foam padding.
6. Once the case is on and all four corners are seated, secure the top and bottom sections by closing the fasteners.
7. Place bill of lading on crate and set in a good location for pick up by shipping vendor.

# Building Immunity

8. Pack the following in the road case:
  - a) Ideum touch table (1)
  - b) Key set to access install program (1)
  - c) Bradbury Science Museum banner (1)
  - d) Anti-static cloth for exhibit and screens (1)
  - e) Packing foam, velcro, and bubble wrap

## Return Shipping

Los Alamos National Lab will send shipping labels and arrange for a carrier to pick up the exhibit and ship it to its next destination. Place shipping labels on cases and secure them.

## Specs

Weight: 286 LBS / 130 KG

Height: 34'

Dimensions: 61' x 36'

Power Source: Standard 120 V outlet

## Contacts

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