

**Who is this Gideon and how will  
he help me?**

or how to use the database to  
Solve the Microbiology Unknown

# How to Begin

Access the library webpage either in the library  
are through the student Intranet

Locate and click on the  
database A-Z



# Find the Gideon link

Click on the G-H.  
When that is loaded  
then scroll down to  
Gideon.  
The name and link will  
appear here.

The screenshot shows the Luzerne County Community College Library website. The browser address bar displays [http://libsys.luzerne.edu/library/resources/databasesA\\_Z.jsp](http://libsys.luzerne.edu/library/resources/databasesA_Z.jsp). The page features a navigation menu on the left with links such as 'About the Library', 'Articles & Histories', 'Information Literacy Tutorial', 'Interlibrary Loan', 'Library Hours', 'Library Items', 'Library Services', 'Library Staff', 'Off-Campus Services', 'Online Help', 'Other Library Help', and 'Virtual Library Tour'. The main content area is titled 'RESEARCH DATABASES' and includes a navigation bar with links 'A-Z', 'C', 'D', 'E', 'G-H', 'I', 'J', 'N', 'O', 'P', 'Q', 'R', 'S', 'W', 'X', 'Y', 'Z'. A table of databases is displayed below, with a red arrow pointing to the 'G-H' link and a yellow arrow pointing to the 'Academic Search Elite' link in the left sidebar.

Database Name	Description	Category
<a href="#">Accessible Archives</a>	This database offers access to full text searchable primary source, on-line collections of 18th and 19th century American newspapers, periodicals and county histories (NY, NJ, PA, MD, DE) to 1900 that speak to several disciplines such as history, language arts, theater and women's studies, geologic and economic history.	American History
<a href="#">Academic Search Elite</a>	This multi-disciplinary full text database offers information in virtually every area of academic study including the social sciences, education, business, medicine, engineering, physics, chemistry, language, arts, and literature.	General
	This database is a comprehensive full-text database of journal articles to current research.	

# Success! You have made it to the site. Now what?

Click on the Middle tab labeled “Microbiology”

The screenshot shows the GIDEON Infectious Diseases website. The browser window title is "GIDEON Infectious Diseases - Diagnosis - Mozilla Firefox". The address bar shows "http://web.gideononline.com/web/diagnosis/index.php". The page features a navigation bar with tabs for "Infectious Diseases", "Microbiology", and "Toxicology". A red arrow points to the "Microbiology" tab. Below the navigation bar, there are sections for "Diagnosis", "Diseases", "Travel", "Drugs", and "Vaccines". The "Diagnosis" section includes a "Suggestions" area, a "Clinical Presentation" section with a list of checkboxes (e.g., "Country", "Incubation Period", "Outbreak or case cluster"), and a "Clinical Summary" section with a "Diagnosis results" box. The "Diagnosis results" box contains the text: "This ranked Diagnosis list is based on the clinical findings which you have entered. The specificity of this Differential Diagnosis is highest if you enter all known positive AND negative findings." The footer of the page includes copyright information: "Copyright © 1994 - 2010 GIDEON Informatics Inc. All Rights Reserved. License Agreement."

# Anatomy of the site.

1. Search engine to find the microbe quickly. This is useful since bacteria names change often.
2. List of all the microbes on the site.
3. Characteristics of the bacteria
4. Method of printing the page
5. Method of comparing more than one bacteria

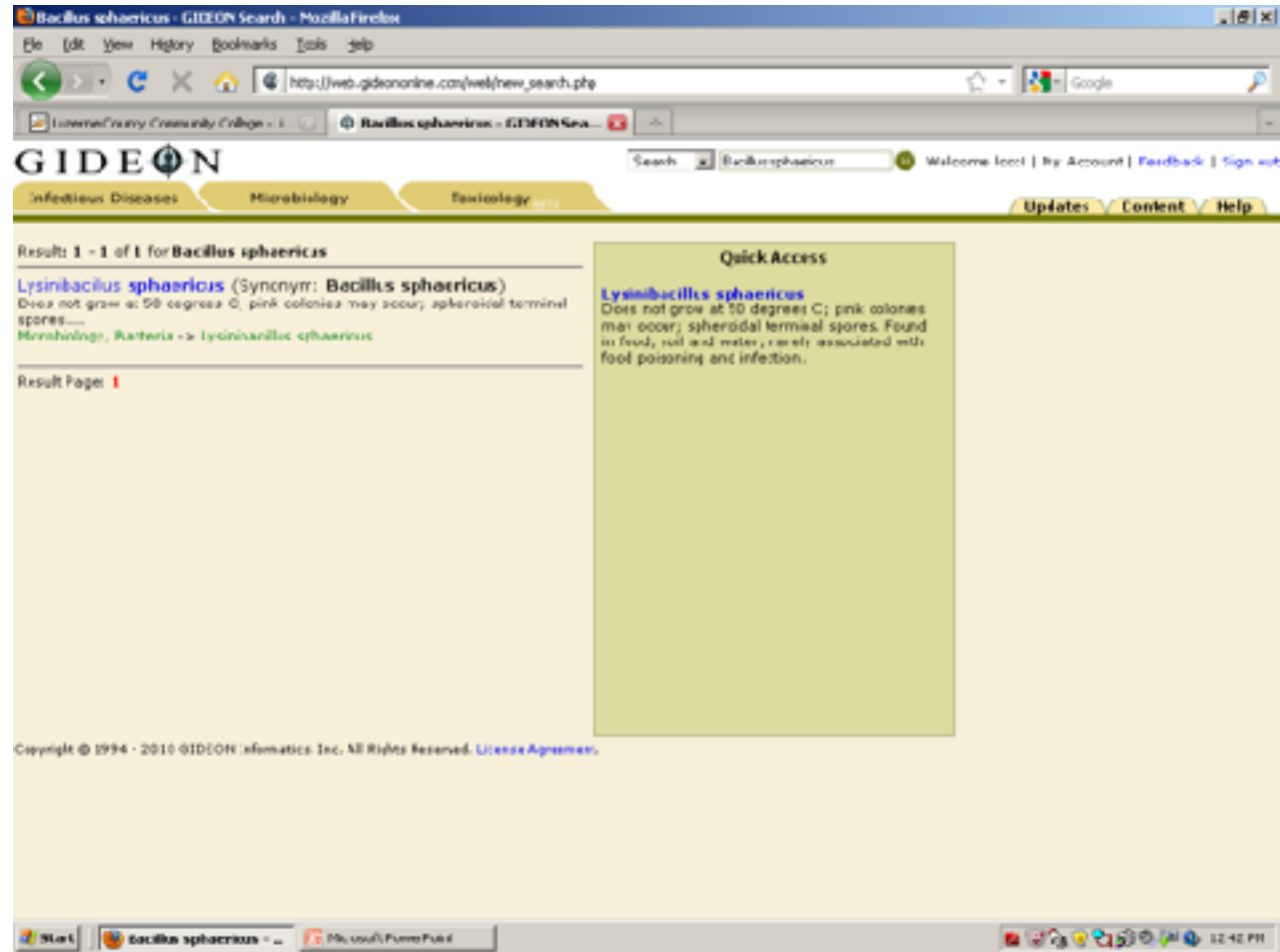
The screenshot shows the GIDEON Microbiology website in a Mozilla Firefox browser window. The address bar displays the URL: [http://web.gideononline.com/web/microbiology/pathogen\\_index.php?type=bacteria](http://web.gideononline.com/web/microbiology/pathogen_index.php?type=bacteria). The page features a search bar at the top right with the text "Search" and a "Go" button. Below the search bar, there are navigation tabs for "Infectious Diseases", "Microbiology", and "Toxicology". The main content area is divided into sections: "Identify Bacteria", "Identify Mycobacteria", and "Identify Yeasts". The "Bacteria list" section contains a scrollable list of bacterial species names, each with a checkbox. The "General Phenotype" section provides detailed information for the selected bacterium, *Abiotrophia defectiva*, including its notes, ecology, and synonyms. A "Compare" button is located at the bottom of the list. The footer of the page includes copyright information: "Copyright © 1994 - 2010 GIDEON Informatics Inc. All Rights Reserved. License Agreement." and the system tray shows the time as 12:42 PM.

Annotations on the screenshot include:

- A red arrow pointing from the search bar to the search engine description.
- A yellow arrow pointing from the "Bacteria list" to the list of microbes description.
- A green arrow pointing from the "General Phenotype" section to the characteristics description.
- A yellow arrow pointing from the "Print" icon in the "General Phenotype" section to the printing method description.
- A red arrow pointing from the "Compare" button to the comparing method description.

# Checking the Name of the Bacterium

Microbe names change frequently as we learn more and more about them. This will eventually make for better taxonomy but annoys us now. Always check a microbe's name. Here we typed in *Bacillus sphaericus* and discovered that it is now called *Lysinibacillus sphaericus*. We would never have guessed if we just scrolled through the microbes.



The screenshot shows a web browser window with the URL [http://web.gideononline.com/web/new\\_search.php](http://web.gideononline.com/web/new_search.php). The search term is *Bacillus sphaericus*. The GIDEON logo is visible at the top. The search results show "Result: 1 - 1 of 1 for *Bacillus sphaericus*". The main result is for *Lysinibacillus sphaericus* (Synonym: *Bacillus sphaericus*). The description states: "Does not grow at 50 degrees C; pink colonies may occur; spheroidal terminal spores." A link for "Microbiology, Bacteria -> Lysinibacillus sphaericus" is provided. A "Quick Access" box on the right contains the same information. The footer of the page reads "Copyright © 1994 - 2010 GIDEON Informatics, Inc. All Rights Reserved. License Agreement".

# General information

We want information on *Bacillus cereus*.

1. We checked the name of the microbe and have found it in the list.
2. Click on the name in the list (not the box) and the general features appear to the right.

The screenshot shows the GIDEON Microbiology website interface. The browser address bar displays the URL: [http://web.gideononline.com/web/microbiology/pathoges\\_index.php?type=bacteria#](http://web.gideononline.com/web/microbiology/pathoges_index.php?type=bacteria#). The search bar contains the text "Bacillus phaeoicus". The main content area is divided into two panels. The left panel, titled "Bacteria list", contains a scrollable list of bacterial species. The right panel, titled "General Phenotype", displays detailed information for the selected species, *Bacillus cereus*.

**Bacteria list**

- Artrobacter sanguis*
- Artrobacter sclerimae*
- Artrobacter soluwensis*
- Asaa bogorensis*
- Atosobium minutum*
- Atosobium parvulum*
- Atosobium rnae*
- Atosobium vaginiae*
- Aurantimonas altaninensis*
- Averyella daitoushensis*
- Avibacterium palliarum*
- Avibacterium rotatum*
- Azospirillum species*
- Bacillus anthracis*
- Bacillus cereus*
- Bacillus cereus var. mycoides*
- Bacillus circulans*
- Bacillus coagulans*
- Bacillus firmus*
- Bacillus idriensis*
- Bacillus infantis*
- Bacillus ischaemiformis*
- Bacillus massiliensis*

Total: 1303 listed

**General Phenotype**

**Bacteria:** *Bacillus cereus*

**Notes:** Does not grow at 50 degrees C; elliptical central spore which does not swell the cell body; colonies may be greenish on blood agar.

**Ecology:** Found in food, isolated from human stool (without disease); common cause of food-related vomiting and diarrhea.

**Synonyms (4 listed):**  
*Bacillus escherichii*  
*Bacillus medusae*  
*Bacterium anthracoides*  
*Bacterium pseudoanthracis*

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# More information

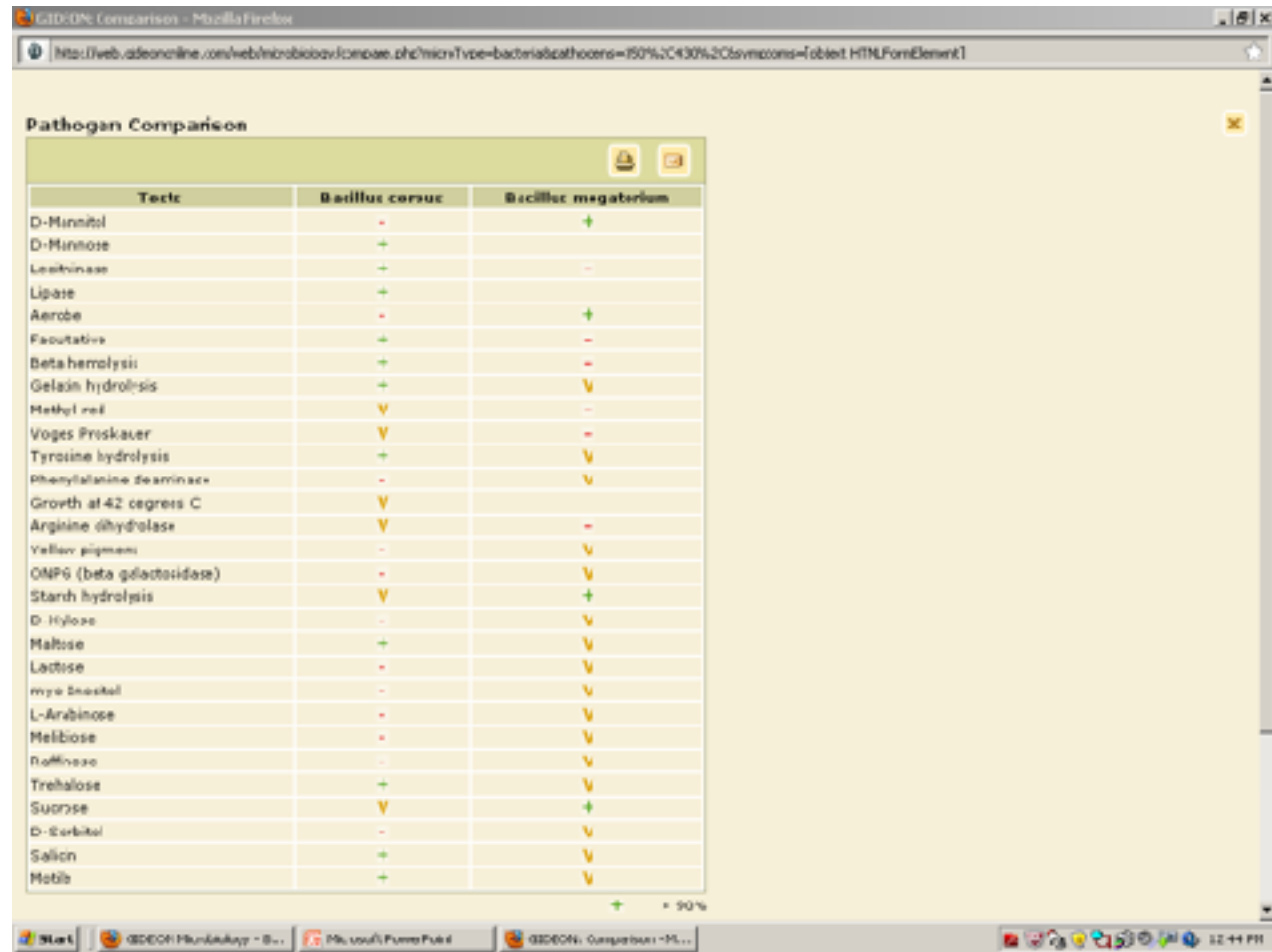
1. Clicking on the phenotype tab gives information on the metabolic tests.
2. Remember
  - + is a positive result
  - is a negative result
  - V means the results are variable due to strains
  - D means that the results are demonstratable but not a 100% of the time

The screenshot shows the GIDEON Microbiology website interface. The browser address bar displays the URL: [http://web.gideononline.com/web/microbiology/pathoges\\_index.php?type=bacteria#](http://web.gideononline.com/web/microbiology/pathoges_index.php?type=bacteria#). The website has a navigation menu with tabs for 'Infectious Diseases', 'Microbiology', and 'Toxicology'. Below the navigation, there are three main sections: 'Identify Bacteria', 'Identify Mycobacteria', and 'Identify Yeasts'. The 'Identify Bacteria' section is active, showing a list of bacteria with checkboxes. The 'Phenotype' tab is selected, displaying the 'Phenotype of Bacillus cereus'. The phenotype list includes various metabolic tests with their results indicated by symbols: '+' for positive, '-' for negative, 'V' for variable, and 'D' for demonstratable but not 100%. The list includes tests such as Gram stain, Spore formation, Rods, Spirochete, Cell wall-deficient, Aerobe, Facultative, Anaerobe, Microaerophilic, Growth on ordinary blood agar, Growth on MacConkey agar, Oxidase, Catalase, Glucose fermenter, Glucose oxidizer, Not identified by in-vitro tests, Beta hemolysis, Motile, Cholesterol needed for growth, X-factor required, V-factor required, Capnophiles, Indole, ONPG (beta-galactosidase), Methyl red, Urgees ProCassner, Citrate, Hydrogen sulfide, and Nitrate to nitrite.



# Finding out what tests to do when you have two or three microbes left.

1. Click on the box in front of the name of the two or three microbes from the list.
2. Click on compare tab at the bottom of the page.
3. Voila! A list of how the two microbes are different.



Pathogen Comparison

Tests	<i>Bacillus cereus</i>	<i>Bacillus megaterium</i>
D-Mannitol	-	+
D-Mannose	+	
Leucininase	+	-
Lipase	+	
Aerobe	-	+
Facultative	+	-
Beta hemolysis	+	-
Gelatin hydrolysis	+	V
Methyl red	V	-
Voges Proskauer	V	-
Tyrosine hydrolysis	+	V
Phenylalanine deaminase	-	V
Growth at 42 degrees C	V	
Arginine dihydrolase	V	-
Yellow pigment	-	V
ONPG (beta galactosidase)	-	V
Starch hydrolysis	V	+
D-xylose	-	V
Maltose	+	V
Lactose	-	V
xylose Biotin	-	V
L-Arabinose	-	V
Melibiose	-	V
Raffinose	-	V
Trehalose	+	V
Sucrose	V	+
D-Sorbitol	-	V
Salicin	+	V
Melib	+	V