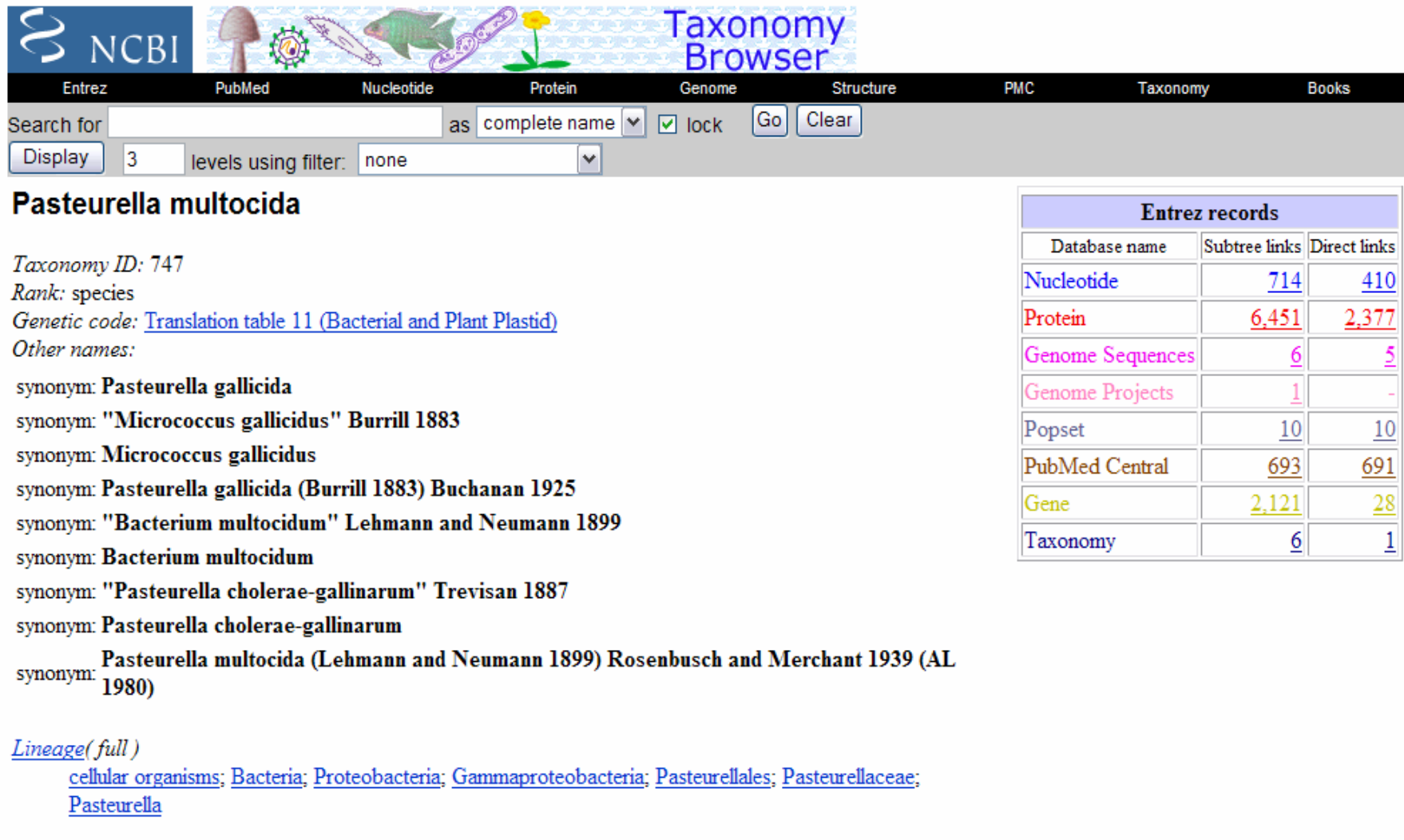


# Bioinformatics Research: An Introduction to NCBI Tools

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# Evolutionary Biology



The screenshot shows the NCBI Taxonomy Browser interface. At the top, there is a navigation bar with links to Entrez, PubMed, Nucleotide, Protein, Genome, Structure, PMC, Taxonomy, and Books. Below this is a search bar with the text "Search for" followed by a text input field, "as" followed by a dropdown menu set to "complete name", a checked "lock" checkbox, and "Go" and "Clear" buttons. Below the search bar is a "Display" button, a text input field with the number "3", and "levels using filter: none" with a dropdown arrow.

**Pasteurella multocida**

*Taxonomy ID:* 747  
*Rank:* species  
*Genetic code:* [Translation table 11 \(Bacterial and Plant Plastid\)](#)  
*Other names:*

- synonym: **Pasteurella gallicida**
- synonym: "**Micrococcus gallicidus**" **Burrill 1883**
- synonym: **Micrococcus gallicidus**
- synonym: **Pasteurella gallicida (Burrill 1883) Buchanan 1925**
- synonym: "**Bacterium multocidum**" **Lehmann and Neumann 1899**
- synonym: **Bacterium multocidum**
- synonym: "**Pasteurella cholerae-gallinarum**" **Trevisan 1887**
- synonym: **Pasteurella cholerae-gallinarum**
- synonym: **Pasteurella multocida (Lehmann and Neumann 1899) Rosenbusch and Merchant 1939 (AL 1980)**

[Lineage \(full\)](#)  
[cellular organisms](#); [Bacteria](#); [Proteobacteria](#); [Gammaproteobacteria](#); [Pasteurellales](#); [Pasteurellaceae](#);  
[Pasteurella](#)

| Entrez records                   |                       |                       |
|----------------------------------|-----------------------|-----------------------|
| Database name                    | Subtree links         | Direct links          |
| <a href="#">Nucleotide</a>       | <a href="#">714</a>   | <a href="#">410</a>   |
| <a href="#">Protein</a>          | <a href="#">6,451</a> | <a href="#">2,377</a> |
| <a href="#">Genome Sequences</a> | <a href="#">6</a>     | <a href="#">5</a>     |
| <a href="#">Genome Projects</a>  | <a href="#">1</a>     | -                     |
| Popset                           | <a href="#">10</a>    | <a href="#">10</a>    |
| <a href="#">PubMed Central</a>   | <a href="#">693</a>   | <a href="#">691</a>   |
| <a href="#">Gene</a>             | <a href="#">2,121</a> | <a href="#">28</a>    |
| <a href="#">Taxonomy</a>         | <a href="#">6</a>     | <a href="#">1</a>     |

<http://www.ncbi.nlm.nih.gov/COG/new/>

# Protein Modeling

The image displays a screenshot of the NCBI MMDB (Molecular Modeling Database) interface for the protein 1GXR. The main window shows the 'Structure Summary' for the 'Wd40 Region Of Human GrouchoTLE1'. The description, deposition date (10-Apr-02), taxonomy (*Homo sapiens*), and reference (PubMed 19767, PDB 1GXR) are provided. A 'View 3D Structure' button is visible, set to 'Best Model' with 'Cn3D' as the viewer. Below this, a protein sequence diagram shows two chains, Chain A and Chain B, with residue markers at 1, 50, 100, and 150. Chain A is highlighted in green, and Chain B is in grey. A blue bar represents the CD (Conserved Domain) for Chain A. To the right, a 3D molecular model of the protein is shown in a '1GXR - Cn3D 4.1' window, rendered in a stick representation with yellow and blue atoms. A calcium ion (Ca) is labeled near the center of the structure. At the bottom, a '1GXR - Sequence/Alignment Viewer' window shows the amino acid sequence for both chains, IGXR\_A and IGXR\_B, which are identical: `dyfqqamgskpaysfhvtdagqmppvpfpddaligppgirharqintl nhgevvcavtisnptrhvvtggkgcvkvwdis hpgnl`.

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?CMD=search&DB=structure>

# Genome Mapping



NCBI Map Viewer

PubMed

Entrez

BLAST

OMIM

Taxonomy

Structure

Search

Find

Find in This View

Advanced Search

Map Viewer Home

Map Viewer Help

Human Maps Help

FTP

Data As Table View

Maps & Options

Compress Map

Region Shown:

Go



You are here:

Ideogram



[Homo sapiens](#) [Build 35.1](#)

[BLAST The Human Genome](#)

Chromosome: [1](#) [[2](#)] [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) [13](#) [14](#) [15](#) [16](#) [17](#) [18](#) [19](#) [20](#) [21](#) [22](#) [X](#) [Y](#) [MT](#)

Master Map: [Genes On Sequence](#)

[Summary of Maps](#)

[Maps & Options](#)

Region Displayed: 0-243M bp

[Download/View Sequence/Evidence](#)

| Ideogram | HsUniG    | Genes_seq | Symbol                   | O | LinkOut   | E | Cyto       | Description             |
|----------|-----------|-----------|--------------------------|---|---|---|------------|-------------------------|
|          | Hs.444012 |           | <a href="#">cig5</a>     | + | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> <a href="#">ccds</a> | C | 2p25.2     | viperin                 |
|          | Hs.74405  |           |                          |   |   |   |            |                         |
|          | Hs.443409 |           | <a href="#">PFN4</a>     | + | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> <a href="#">ccds</a>                      | C | 2p23.3     | profilin family, memb   |
|          | Hs.212102 |           |                          |   |   |   |            |                         |
|          | Hs.111894 |           | <a href="#">FEZ2</a>     | + | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a>                      | C | 2p21       | fasciculation and elon  |
|          | Hs.406064 |           |                          |   |   |   |            |                         |
|          | Hs.75860  |           |                          |   |   |   |            |                         |
|          | Hs.425808 |           | <a href="#">MSH2</a>     | + | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> <a href="#">ccds</a> | C | 2p22-p21   | mutS homolog 2, col     |
|          | Hs.205401 |           |                          |   |   |   |            |                         |
|          | Hs.436349 |           | <a href="#">ETAA16</a>   | + | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">ccds</a>   | C | 2p13-p15   | ETAA16 protein          |
|          | Hs.311640 |           |                          |   |   |   |            |                         |
|          | Hs.374334 |           | <a href="#">DUSP11</a>   | + | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> <a href="#">ccds</a> | C | 2p13.1     | dual specificity phosph |
|          | Hs.368149 |           |                          |   |   |   |            |                         |
|          | Hs.49407  |           | <a href="#">GNLY</a>     | + | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">ccds</a>                    | C | 2p12-q11   | granulysin              |
|          | Hs.446574 |           |                          |   |   |   |            |                         |
|          | Hs.377975 |           | <a href="#">IGKV1-9</a>  | + | <a href="#">sv</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | C | 2p12       | immunoglobulin kapp     |
|          | Hs.246112 |           |                          |   |   |   |            |                         |
|          | Hs.375921 |           | <a href="#">FLJ10081</a> | + | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a>   | C | 2p12-p11.2 | hypothetical protein F  |
|          |           |           |                          |   |   |   |            |                         |
|          |           |           | <a href="#">MGC5509</a>  | + | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> <a href="#">ccds</a>                      | C | 2q12.1     | hypothetical protein M  |
|          |           |           |                          |   |   |   |            |                         |
|          |           |           | <a href="#">ACTR3</a>    | + | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a>                      | C | 2q14.1     | ARP3 actin-related p    |
|          |           |           |                          |   |   |   |            |                         |
|          |           |           | <a href="#">MGC50273</a> | + | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">ccds</a>   | C | 2q21       | MGC50273 protein        |
|          |           |           |                          |   |   |   |            |                         |
|          | Hs.5324   |           | <a href="#">UPP2</a>     | + | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> <a href="#">ccds</a>                      | C | 2q24.1     | uridine phosphorylase   |

<http://www.ncbi.nlm.nih.gov/projects/genome/guide/human/>

# Online Mendelian Inheritance in Man

Map Viewer Home  
 Map Viewer Help  
 Human Maps Help  
 FTP  
 Data As Table View  
 Maps & Options  
 Compress Map   
 Region Shown:  
 13q33.3  
 13q34  
 Go

**Homo sapiens Build 35.1** [BLAST The Human Genome](#)  
 Chromosome: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) [ [13](#) ] [14](#) [15](#) [16](#) [17](#) [18](#) [19](#) [20](#) [21](#) [22](#) [X](#) [Y](#) [MT](#)  
 Query: [ING1](#) [clear]

Master Map: Genes On Cytogenetic Summary of Maps [Maps & Options](#)

Region Displayed: **13q33.3-13q34**

| Genes_seq | Morbid | Genes_cyto | Symbol                    | LinkOut  | Cyto    | Description                                   |
|-----------|--------|------------|---------------------------|--|---------|---|
|           |        |            | <a href="#">MYR8</a>      | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a>                      | 13q33.3 | myosin heavy chain Myr 8                      |
|           |        |            | <a href="#">COL4A1</a>    | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> | 13q34   | collagen, type IV, alpha 1                    |
|           |        |            | <a href="#">COL4A2</a>    | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> | 13q34   | collagen, type IV, alpha 2                    |
|           |        |            | <a href="#">RAB20</a>     | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a>                      | 13q34   | RAB20, member RAS oncogene family             |
|           |        |            | <a href="#">FLJ10769</a>  | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a>                      | 13q34   | hypothetical protein FLJ10769                 |
|           |        |            | <a href="#">FLJ12118</a>  | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a>                      | 13q34   | hypothetical protein FLJ12118                 |
|           |        |            | <a href="#">ING1</a>      | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> | 13q34   | inhibitor of growth family, member 1          |
|           |        |            | <a href="#">LOC387946</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | similar to hypothetical protein               |
|           |        |            | <a href="#">LOC283487</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | hypothetical protein LOC283487                |
|           |        |            | <a href="#">ANKRD10</a>   | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a>                      | 13q34   | ankyrin repeat domain 10                      |
|           |        |            | <a href="#">ADPRT1</a>    | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | ADP-ribosyltransferase (NAD+; poly (ADP       |
|           |        |            | <a href="#">LOC144962</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | hypothetical LOC144962                        |
|           |        |            | <a href="#">ARHGEF7</a>   | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> | 13q34   | Rho guanine nucleotide exchange factor (GE    |
|           |        |            | <a href="#">LOC121792</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | similar to histidine-rich protein             |
|           |        |            | <a href="#">MGC35169</a>  | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | hypothetical protein MGC35169                 |
|           |        |            | <a href="#">LOC390426</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | similar to splicing coactivator subunit SRm30 |
|           |        |            | <a href="#">LOC440148</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | LOC440148                                     |
|           |        |            | <a href="#">SOX1</a>      | <a href="#">OMIM</a> <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a> <a href="#">hm</a> | 13q34   | SRY (sex determining region Y)-box 1          |
|           |        |            | <a href="#">LOC400161</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | hypothetical LOC400161                        |
|           |        |            | <a href="#">LOC401740</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | similar to Hypothetical protein CBG01089      |
|           |        |            | <a href="#">LOC400163</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | hypothetical LOC400163                        |
|           |        |            | <a href="#">LOC400164</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | hypothetical LOC400164                        |
|           |        |            | <a href="#">LOC122258</a> | <a href="#">sv</a> <a href="#">pr</a> <a href="#">dl</a> <a href="#">ev</a> <a href="#">mm</a>   | 13q34   | LOC122258                                     |

**You are here:**  
 Ideogram  
 13p13  
 13p12  
 13p11.2  
 13p11  
 13q11  
 13q12  
 13q13  
 13q14  
 13q21  
 13q22  
 13q31  
 13q32

<http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=OMIM>

## Bioinformatics Support Network (BSN) Member List

*revised September 1, 2005*

### Purpose

The purpose of the Bioinformatics Support Network (BSN) is to provide a network for communication and continuing education in the area of molecular biology and genomic information resources among bioinformatics support staff based in academic libraries.

### Membership

Members of the BSN include developers and participants of the [NCBI Advanced Workshop for Bioinformatics Information Specialists \(NAWBIS\)](#). A [BSN mailing list](#) is available for communication among members. You can modify your listserv settings through the [mailing list web page](#), using your username and password. Group **photos** are available for the NAWBIS [developers](#) and class of [2002](#). Individual photos, when available, are linked to the member names below. All photos open in a separate window.

### Update Your Listing

To update your listing, please send your new contact information to [Renata Geer](#).

### Member List

(the "at sign" has been replaced with "XX" in the list below to prevent unwanted use of e-mail addresses)

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

<http://www.ncbi.nlm.nih.gov/Class/NAWBIS/BSN/members.html>



## Grants and Funding: Extramural Programs

[Home](#) > [Grants and Funding](#)

### Research Grants In Biomedical Informatics And Bioinformatics

#### ■ Introduction

PAR Number: PAR-04-141

Release Date: 08-13-2004

Expiration Date: 11-02-2007, unless reissued

#### ■ Scope and Priorities

##### Purpose

The purpose of this program announcement is to reissue and update the National Library of Medicine's research grant program for biomedical informatics and bioinformatics. NLM's research funding centers on understanding data, information and knowledge – their nature, forms and uses – in the domains of health care and basic biological sciences.

##### Research Objectives

NLM defines biomedical informatics as the intersection of basic informational and computing sciences with an application domain in biomedicine, as discussed in the work of the American College of Medical Informatics referenced below. The term biomedical informatics encompasses the closely- aligned field of bioinformatics, which can be defined as the intersection of basic informational and computer sciences with an application domain in biological/biochemical sciences. NLM's research focuses on management and efficient utilization of data, information and knowledge in health care and basic biomedical sciences.

In clinical medicine, health services administration, education and basic biomedical sciences, computers and networks are fundamental tools of discovery, learning, decision making and management. NLM's biomedical informatics research grants support the study of how information is best captured, represented, stored, retrieved, manipulated, managed and disseminated for use in these kinds of activities.

#### Helper Links for Research Grants

[Review Guide for R01 grants](#)

[Human Subjects and Data Monitoring](#)

[Data Safety & Monitoring Plan Requirements](#)

[FAQ on Data Sharing](#)

[Grant Writing Tips](#)

[Recent Research Awards](#)

[Required Federal Citations](#)

[Reports Required](#)

#### Grant Program Overviews

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[Resource Support](#)

[Career Support](#)

[Training Support](#)

[Small Business R & D Support](#)