



# Objective and Audience



## Objective

This webinar will introduce changes made to MeSH for 2024 and discuss how they may impact you as a PubMed searcher.



## Audience

PubMed searchers, librarians, catalogers who are familiar with MeSH's structure (Main Headings, SCR, ET, etc.)

# MeSH Database



The screenshot shows the MeSH Database homepage. At the top left is the NIH logo and the text "National Library of Medicine National Center for Biotechnology Information". At the top right is a "Log in" button. Below this is a search bar with "MeSH" in a dropdown menu, a search input field, and a "Search" button. There are also links for "Limits" and "Advanced" search, and a "Help" link on the right. The main content area features a photograph of a forest on the left and a dark blue box on the right with the heading "MeSH" and a description: "MeSH (Medical Subject Headings) is the NLM controlled vocabulary thesaurus used for indexing articles for PubMed." Below this are two columns of links: "Using MeSH" with "Help" and "Tutorials" links, and "More Resources" with "E-Utilities" and "NLM MeSH Homepage" links.

NIH National Library of Medicine  
National Center for Biotechnology Information

Log in

MeSH MeSH Search

Limits Advanced Help

**MeSH**

MeSH (Medical Subject Headings) is the NLM controlled vocabulary thesaurus used for indexing articles for PubMed.

**Using MeSH**

[Help](#)

[Tutorials](#)

**More Resources**

[E-Utilities](#)

[NLM MeSH Homepage](#)

# Agenda

1. Overview
2. Examples of New & Updated Terms
  - a) Viruses
  - b) Crustacea
  - c) Neoplasms
  - d) Social Sciences
  - e) Reptiles
3. Collaborative Project
4. Q&A panel

# Overview



## NLM TECHNICAL BULLETIN

NATIONAL LIBRARY OF MEDICINE | NATIONAL INSTITUTES OF HEALTH

Annual MeSH Processing for 2024 MeSH. NLM Tech Bull. 2023 Nov-Dec;(455):e3.

# Overview: Stats

**30,764**

MeSH Main Headings



**311**

New Main Headings

**322,838**

Supplementary Concept Records



**367**

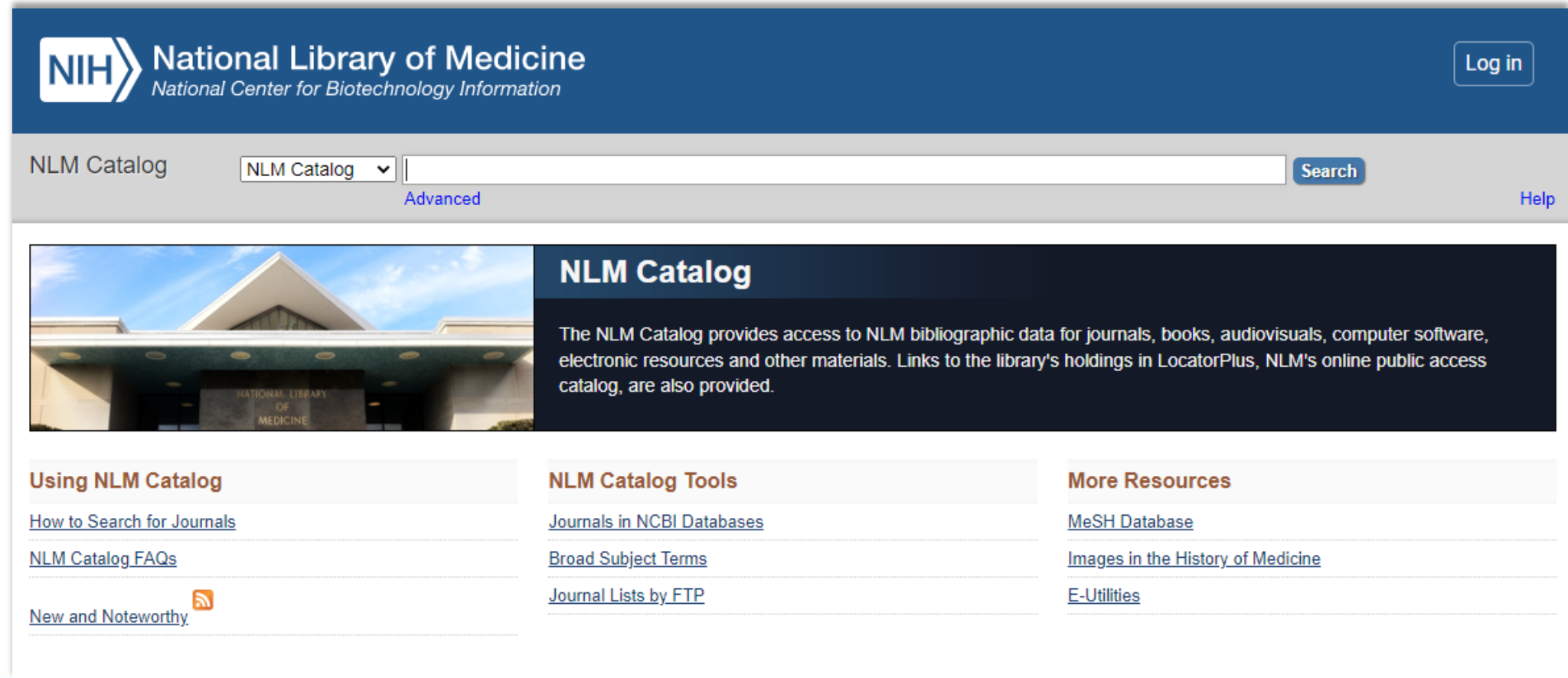
New SCRs

# New MeSH Headings by Branch

Branch	Nº
A. Anatomy	17
B. Organisms	35
C. Diseases	96
<b>D. Chemicals and Drugs</b>	<b>175</b>
E. Analytical, Diagnostic and Therapeutic Techniques and Equipment	59
F. Psychiatry and Psychology	31
G. Phenomena and Processes	45
H. Disciplines and Occupations	11

Branch	Nº
I. Anthropology, Education, Sociology and Social Phenomena	24
J. Technology, Industry, Agriculture	2
K. Humanities	0
L. Information Science	11
M. Named Groups	44
N. Health Care	18
V. Publication Characteristics	2
Z. Geographicals	3

# MeSH in Cataloging



The screenshot shows the homepage of the National Library of Medicine (NLM) Catalog. At the top left is the NIH logo and the text "National Library of Medicine National Center for Biotechnology Information". A "Log in" button is in the top right. Below the header is a search bar with "NLM Catalog" selected in a dropdown menu, a search input field, and a "Search" button. A "Help" link is on the right. The main content area features a large image of the NLM building and a section titled "NLM Catalog" with a description: "The NLM Catalog provides access to NLM bibliographic data for journals, books, audiovisuals, computer software, electronic resources and other materials. Links to the library's holdings in LocatorPlus, NLM's online public access catalog, are also provided." Below this are three columns of links: "Using NLM Catalog" (How to Search for Journals, NLM Catalog FAQs, New and Noteworthy), "NLM Catalog Tools" (Journals in NCBI Databases, Broad Subject Terms, Journal Lists by FTP), and "More Resources" (MeSH Database, Images in the History of Medicine, E-Utilities).

**NIH** National Library of Medicine  
National Center for Biotechnology Information

NLM Catalog   [Help](#)

[Advanced](#)

## NLM Catalog

The NLM Catalog provides access to NLM bibliographic data for journals, books, audiovisuals, computer software, electronic resources and other materials. Links to the library's holdings in LocatorPlus, NLM's online public access catalog, are also provided.

### Using NLM Catalog

- [How to Search for Journals](#)
- [NLM Catalog FAQs](#)
- [New and Noteworthy](#)

### NLM Catalog Tools

- [Journals in NCBI Databases](#)
- [Broad Subject Terms](#)
- [Journal Lists by FTP](#)

### More Resources

- [MeSH Database](#)
- [Images in the History of Medicine](#)
- [E-Utilities](#)



# MeSH in Cataloging



## NLM TECHNICAL BULLETIN

NATIONAL LIBRARY OF MEDICINE | NATIONAL INSTITUTES OF HEALTH

Use of 2024 MeSH in Cataloging. NLM Tech Bull. 2023 Nov-Dec;(455):e4.

# Examples of New & Updated Terms

# Respiratory Syncytial Viruses

Viruses

[2023]

## **RESPIRATORY SYNCYTIAL VIRUSES**

[ET] CHIMPANZEE CORYZA AGENT(S)

# Respiratory Syncytial Viruses

Viruses

[2024]

## **RESPIRATORY SYNCYTIAL VIRUSES**

[ET] CHIMPANZEE CORYZA AGENT(S)

[ET] ORTHOPNEUMOVIRUS(ES)

[ET] RSV RESPIRATORY SYNCYTIAL VIRUS

# Variations of entry terms


## [ET] ORTHOPNEUMOVIRUS

History and Search Details						Download	Delete	
Search	Actions	Details	Query	Results	Time			
#2	...	▼	Search: <b>orthopneumovirus</b> <b>"respiratory syncytial viruses"[MeSH Terms]</b> OR ("respiratory"[All Fields] AND "syncytial"[All Fields] AND "viruses"[All Fields]) OR "respiratory syncytial viruses"[All Fields] OR "orthopneumovirus"[All Fields]	13,867	13:59:52			
			<b>Translations</b> <b>orthopneumovirus:</b> "respiratory syncytial viruses"[MeSH Terms] OR ("respiratory"[All Fields] AND "syncytial"[All Fields] AND "viruses"[All Fields]) OR "respiratory syncytial viruses"[All Fields] OR "orthopneumovirus"[All Fields]					

# Variations of entry terms 2

## [ET] RSV RESPIRATORY SYNCYTIAL VIRUS

### History and Search Details

 Download  Delete

Search	Actions	Details	Query	Results	Time
#1	...		Search: <b>rsv</b> "rsv"[All Fields]	16,054	13:58:55

RESVERATROL?

RADIATION SYNOVECTOMY?

ROSUVASTATIN?

ROUS SARCOMA VIRUS?

# The MeSH Database is your friend.

The screenshot shows the MeSH database search interface. At the top, the NIH National Library of Medicine logo is on the left, and a 'Log in' button is on the right. Below the header, the search bar contains 'MeSH' in a dropdown menu and 'rsv' in the input field, with a 'Search' button to the right. Below the search bar are links for 'Create alert', 'Limits', and 'Advanced', and a 'Help' link on the far right. The main content area shows search results for 'rsv'. On the left, there are two search results, each with a checkbox and a link to the term. The first result is 'Respiratory Syncytial Virus Vaccines' with a description and 'Year introduced: 2001'. The second result is 'Respiratory Syncytial Virus Infections' with a description and 'Year introduced: 1994'. In the center, there are navigation buttons: '<< First', '< Prev', 'Page 1 of 2', 'Next >', and 'Last >>'. On the right, there is a 'Send to:' dropdown menu, a 'PubMed Search Builder' section with a text area, 'Add to search builder' button, 'AND' dropdown, and 'Search PubMed' button. Below that is a 'YouTube Tutorial' link. At the bottom right, there is a 'Find related data' section with a 'Database:' dropdown menu set to 'Select'.

NIH National Library of Medicine  
National Center for Biotechnology Information

MeSH MeSH rsv Search

Create alert Limits Advanced Help

Summary 20 per page Send to:

**Search results**

Items: 1 to 20 of 27

<< First < Prev Page 1 of 2 Next > Last >>

[Respiratory Syncytial Virus Vaccines](#)

1. Vaccines or candidate vaccines used to prevent infection with RESPIRATORY SYNCYTIAL VIRUSES.  
Year introduced: 2001

[Respiratory Syncytial Virus Infections](#)

2. Pneumovirus infections caused by the RESPIRATORY SYNCYTIAL VIRUSES. Humans and cattle are most affected but infections in goats and sheep have been reported.  
Year introduced: 1994

PubMed Search Builder

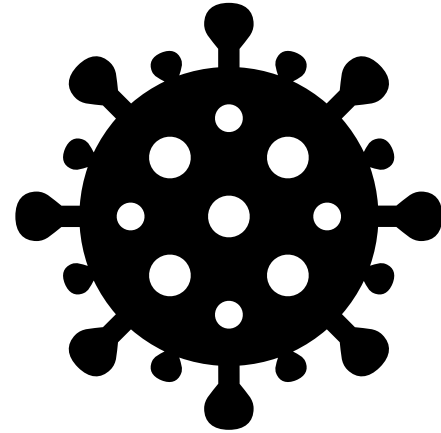
Add to search builder AND Search PubMed

YouTube Tutorial

Find related data

Database: Select

# Viruses



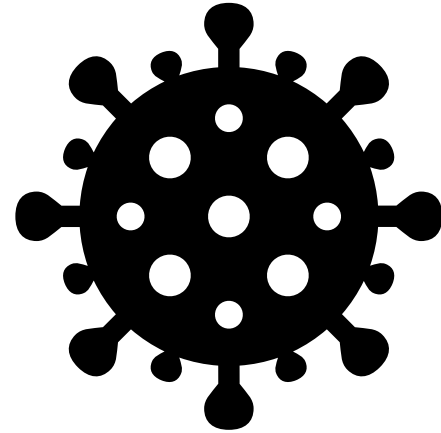
**INFLUENZAVIRUS A**



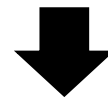
[MH] **ALPHAINFLUENZAVIRUS**



# Viruses



[ET] **INFLUENZAVIRUS A**



[MH] **ALPHAINFLUENZAVIRUS**

# MeSH 2024

## Influenzavirus A Example

**PubMed**®

"Influenzavirus A"[MeSH] × **Search**

[Advanced](#) [Create alert](#) [Create RSS](#) [User Guide](#)

Sort by: Best match ⌵ Display options ⚙️

MY NCBI FILTERS 🔗

TEXT AVAILABILITY

Abstract

Free full text

Full text


**No results were found.**

**⚠️** Your search was processed without automatic term mapping because it retrieved zero results.

**⚠️** The following term was ignored: influenzavirus a

## MeSH 2024


## Influenzavirus A Example 2



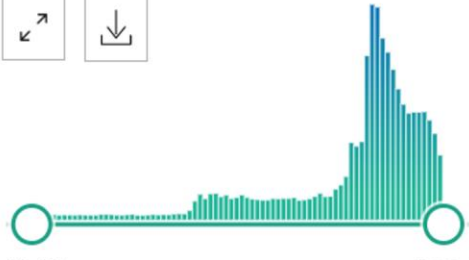
[Advanced](#)
[Create alert](#)
[Create RSS](#)
[User Guide](#)

Sort by:

---

MY NCBI FILTERS 
50,099 results

 << < Page  of 5,010 > >>


RESULTS BY YEAR
   


[An inactivated multivalent influenza A virus vaccine is broadly protective in mice and ferrets.](#)

1  
 Cite Park J, Fong Legaspi SL, Schwartzman LM, Gygli SM, Sheng ZM, Freeman AD, Matthews LM, Xiao Y, Ramuta MD, Batchenkova NA, Qi L, Rosas LA, Williams SL, Scherler K, Gouzoulis M, Bellayr I, Morens DM, Walters KA, Memoli MJ, Kash JC, Taubenberger JK.

Share Sci Transl Med. 2022 Jul 13;14(653):eabo2167. doi: 10.1126/scitranslmed.abo2167. Epub 2022 Jul 13. PMID: 35857640

# MeSH Database: Results List, Scope Notes


**National Library of Medicine**  
*National Center for Biotechnology Information*

[Log in](#)

MeSH MeSH Influenzavirus A Search

[Create alert](#) [Limits](#) [Advanced](#)

[Help](#)

[Summary](#)

[Send to:](#)

**Search results**

**Items: 2**

[Alphainfluenzavirus](#)  
 1. A genus in the family ORTHOMYXOVIRIDAE causing influenza and other diseases in humans and animals. It contains many strains as well as antigenic subtypes of the integral membrane proteins hemagglutinin (VIRAL HEMAGGLUTININS) and NEURAMINIDASE. The type species is INFLUENZA A VIRUS.  
 Year introduced: 2002

**PubMed Search Builder**

AND ▼

[YouTube Tutorial](#)

**Find related data**


**National Library of Medicine**

# Crustacea



Image from Colbourne JK, et al.

## DAPHNIA



**DAPHNIA PULEX**  
[SCR 2023]

# Crustacea

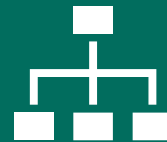


Image from Colbourne JK, et al.

## DAPHNIA

**DAPHNIA PULEX** [MH 2024]

**DAPHNIA MAGNA** [MH 2024]



Automatic Explosion

# MeSH Database Record: Daphnia

## Daphnia

A diverse genus of minute freshwater CRUSTACEA, of the suborder CLADOCERA. They are a major food source for both young and adult freshwater fish.

Year introduced: 1972

[All MeSH Categories](#)

[Organisms Category](#)

[Eukaryota](#)

[Animals](#)

[Invertebrates](#)

[Arthropods](#)

[Crustacea](#)

[Cladocera](#)

**Daphnia**

[Daphnia magna](#)

[Daphnia pulex](#)

Neoplasms

# PANCREATIC NEOPLASMS



**PANCREATIC CARCINOMA**  
[SCR 2023]



# Neoplasms

[2024]

## **PANCREATIC NEOPLASMS**

[ET] PANCREATIC CARCINOMA

ADENOMA, ISLET CELL

CARCINOMA, ISLET CELL



CARCINOMA, PANCREATIC DUCTAL

PANCREATIC INTRADUCTAL NEOPLASMS

## MeSH 2023

## Pancreatic Carcinoma Example 1

## History and Search Details

 Download
  Delete

Search	Actions	Details	Query	Results	Time
#6	...	▼	Search: <b>pancreatic carcinoma</b> <span style="border: 2px solid green; padding: 2px;">"pancreatic carcinoma"[Supplementary Concept]</span> OR "pancreatic carcinoma"[All Fields] OR "pancreatic carcinoma"[All Fields]	13,348	15:08:30
<b>Translations</b>					
<b>pancreatic carcinoma:</b> "Pancreatic Carcinoma"[Supplementary Concept] OR "Pancreatic Carcinoma"[All Fields] OR "pancreatic carcinoma"[All Fields]					

# MeSH 2024

## Pancreatic Carcinoma Example 2

### History and Search Details

Download Delete

Search	Actions	Details	Query	Results	Time
#5	...	▼	<p>Search: <b>pancreatic carcinoma</b></p> <p>"pancreatic neoplasms"[MeSH Terms] OR ("pancreatic"[All Fields] AND "neoplasms"[All Fields]) OR "pancreatic neoplasms"[All Fields] OR ("pancreatic"[All Fields] AND "carcinoma"[All Fields]) OR "pancreatic carcinoma"[All Fields]</p> <p><b>Translations</b></p> <p><b>pancreatic carcinoma:</b> "pancreatic neoplasms"[MeSH Terms] OR ("pancreatic"[All Fields] AND "neoplasms"[All Fields]) OR "pancreatic neoplasms"[All Fields] OR ("pancreatic"[All Fields] AND "carcinoma"[All Fields]) OR "pancreatic carcinoma"[All Fields]</p>	121,502	13:2:58

# Demo: MeSH Database

# MeSH Changes and PubMed Searching Class

[Home](#) / [Training](#) / [MeSH Changes and PubMed Searching 2024](#)

## MeSH Changes and PubMed Searching 2024

### Class Experience Level

Beginner, Intermediate, Advanced

[LOGIN TO REGISTER](#)

Each year, the Medical Subject Headings (MeSH) are updated. How does this affect your PubMed searches? What happens when a term gets changed, added, removed, or moved to a different part of the MeSH hierarchy? How do you accommodate for vocabulary changes over time in your comprehensive searches? How do you check your saved searches and alerts?

During this interactive class, you'll have the opportunity to hear from NLM staff about these changes, ask questions, and practice searching with MeSH in PubMed.

### Objectives:

Successful participants will be able to:

- Describe how the MeSH vocabulary is maintained
- Explain how the addition, revision, deletion and rearrangement of MeSH terms affect your PubMed searches
- Check your saved searches and alerts for needed changes

By registering for this class, you are agreeing to the NNLM Code of Conduct.

### Class Details

**Date(s):** January 25, 2024

**Time:** 1:00 PM - 2:30 PM EST

**Platform:** Zoom

**CE Credits:** 1.50

**CE Categories:** MLA

**Class Experience Level:** Beginner, Intermediate, Advanced

This is a National NNLM class.

[LOGIN TO REGISTER](#)

[CREATE AN NNLM USER ACCOUNT](#)

# Social Sciences

[2023]

## **POLITICS**

[ET] VOTING

DIPLOMACY



ENVIRONMENTALISM


LOBBYING

POLITICAL ACTIVISM

STAKEHOLDER PARTICIPATION

## History and Search Details

 Download  Delete

Search	Actions	Details	Query	Results	Time
#1	...		<p>Search: <b>voting</b></p> <p><b>"politics"[MeSH Terms]</b> OR "politics"[All Fields] OR "voting"[All Fields] OR "voted"[All Fields] OR "votes"[All Fields] OR "votings"[All Fields]</p> <p><b>Translations</b></p> <p><b>voting:</b> "politics"[MeSH Terms] OR "politics"[All Fields] OR "voting"[All Fields] OR "voted"[All Fields] OR "votes"[All Fields] OR "votings"[All Fields]</p>	76,259	14:06:25

Showing 1 to 1 of 1 entries

# Voting as Main Heading

[2024]

## **POLITICS**

DIPLOMACY

ENVIRONMENTALISM

LOBBYING

POLITICAL ACTIVISM

STAKEHOLDER PARTICIPATION

VOTING

Social  
Sciences



# MeSH 2024

## Voting Main Heading in Search Translation

History and Search Details Download Delete

Search	Actions	Details	Query	Results	Time
#7	...	▼	Search: <b>voting</b> "voted"[All Fields] OR "votes"[All Fields] OR "voting"[MeSH Terms] OR "voting"[All Fields] OR "votings"[All Fields]	8,429	13:1:14
<b>Translations</b> <b>voting:</b> "voted"[All Fields] OR "votes"[All Fields] OR "voting"[MeSH Terms] OR "voting"[All Fields] OR "votings"[All Fields]					

# Reptiles



[2023]

## **SNAKES**

ALETHINOPHIDIA

BOIDAE

COLUBRIDAE

ELAPIDAE

VIPERIDAE

# Reptiles



[2024]

## **SNAKES**

ALETHINOPHIDIA

BOIDAE

COLUBRIDAE

ELAPIDAE

VIPERIDAE

VENOMOUS SNAKES

ELAPIDAE

VIPERIDAE

# MeSH 2023

**PubMed**®

"Elapidae"[Mesh] OR "Viperidae"[Mesh] × **Search**

[Advanced](#) [Create alert](#) [Create RSS](#) [User Guide](#)

Save Email Send to Sort by: Best match ⌵ Display options ⚙️

MY NCBI FILTERS 🔗 **7,425 results** ⏪ < Page 1 of 743 > ⏩

RESULTS BY YEAR


↶ ⬇️

**A Review of the Proteomic Profiling of African Viperidae and Elapidae Snake Venoms and Their Antivenom Neutralisation.**

1  
Cite Offor BC, Muller B, Piater LA.  
Toxins (Basel). 2022 Oct 22;14(11):723. doi: 10.3390/toxins14110723.  
Share PMID: 36355973 **Free PMC article.** Review.

## MeSH 2024


## Venomous snakes



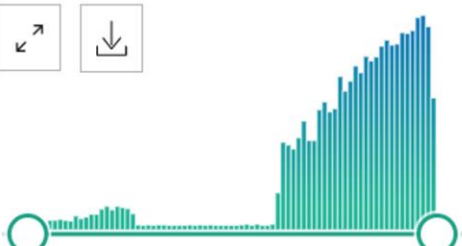
×
Search

[Advanced](#)
[Create alert](#)
[Create RSS](#)
[User Guide](#)

Save
Email
Send to
Sort by: Best match
Display options

MY NCBI FILTERS 
7,425 results

 << < Page 1 of 743 > >>

RESULTS BY YEAR
   


[Terrestrial venomous snakes and snakebites in the Arab countries of the Middle East.](#)

1

Cite Amr ZS, Abu Baker MA, Warrell DA.

Share Toxicon. 2020 Apr 15;177:1-15. doi: 10.1016/j.toxicon.2020.01.012. Epub 2020 Jan 27.

PMID: 32001320    Review.



National Institute  
on Aging

# New MeSH Terms on PSYCHOLOGICAL STRESS

COPING SKILLS  
EMOTIONAL EXHAUSTION  
JOB SECURITY  
MEDIA EXPOSURE  
MEDICAL NEGLECT  
PSYCHOLOGICAL GROWTH  
ROLE CONFLICT  
SUBJECTIVE STRESS  
TIME PRESSURE  
FINANCIAL STRAIN  
PSYCHOLOGICAL RECOVERY  
RESILIENT RESPONSES  
SELECTIVE ATTENTION  
...and more!



# NLM Office Hour PubMed & Automated Indexing

February 28, 2024

1 p.m. – 1:45 p.m. ET

# Q&A with Experts





Thank you!

See you next time:

- MeSH Changes and PubMed Searching Class, 1/25, 1 p.m. ET
- NLM Office Hour, 2/28, 1 p.m. ET

[www.nlm.gov/training](http://www.nlm.gov/training)

# How to Get Your MLA CE

## NNLM & MLA Training Session Evaluation

### Thank You!

If you would like to obtain Continuing Education Credit from the Medical Library Association for participating in this class, please go to [www.medlib-ed.org](http://www.medlib-ed.org) and follow the instructions below. ([Learn more about MLA CE](#)).

1. Login (If you do not have a current MLANET login, you will need to create one: [Step-by-step instructions.](#))
2. Click My Learning on the blue bar near the top of the page.
3. Enter the enrollment code , click Redeem, and Claim credit.
4. If you have questions or run into problems with MEDLIB-ED, please email [MEDLIB-ED@mail.mlahq.org](mailto:MEDLIB-ED@mail.mlahq.org).

A code will appear in #3 on this screen.

Please note: The Medical Library Association has recently changed their procedures for obtaining CE credit, which includes registering for an account on MEDLIB-ED. While there are several steps, you may note that only a few fields are required. The NNLM no longer provides certificates for MLA CE.

Thank you for completing our evaluation form. Your responses will help the National Network of Libraries of Medicine continue to improve.

100%

# Citations

1. Colbourne JK, Pfrender ME, Gilbert D, Thomas WK, Tucker A, Oakley TH, Tokishita S, Aerts A, Arnold GJ, Basu MK, Bauer DJ, Cáceres CE, Carmel L, Casola C, Choi JH, Detter JC, Dong Q, Dusheyko S, Eads BD, Fröhlich T, Geiler-Samerotte KA, Gerlach D, Hatcher P, Jogdeo S, Krijgsveld J, Kriventseva EV, Kültz D, Laforsch C, Lindquist E, Lopez J, Manak JR, Muller J, Pangilinan J, Patwardhan RP, Pitluck S, Pritham EJ, Rechtsteiner A, Rho M, Rogozin IB, Sakarya O, Salamov A, Schaack S, Shapiro H, Shiga Y, Skalitzky C, Smith Z, Souvorov A, Sung W, Tang Z, Tsuchiya D, Tu H, Vos H, Wang M, Wolf YI, Yamagata H, Yamada T, Ye Y, Shaw JR, Andrews J, Crease TJ, Tang H, Lucas SM, Robertson HM, Bork P, Koonin EV, Zdobnov EM, Grigoriev IV, Lynch M, Boore JL. The ecoresponsive genome of *Daphnia pulex*. *Science*. 2011 Feb 4;331(6017):555-61. doi: 10.1126/science.1197761. PMID: 21292972; PMCID: PMC3529199.