



PubMed, PubMed Central and PMCID's

Rev. 27 April 2011

NIH Public Access Policy

<http://publicaccess.nih.gov/policy.htm>

http://publicaccess.nih.gov/determine_applicability.htm

Requires submission for public access in PubMed Central:

- Peer-reviewed articles or manuscripts accepted for publication after April 7, 2008

Resulting from:

- NIH-funded research grants or cooperative agreements, full or partial
- No later than 12 months after the official date of publication



PubMed (aka **PubMed MEDLINE**) is an index or database of citations and abstracts to more than 20 million biomedical and life sciences journal articles beginning in the mid-1940's. Maintained by the National Library of Medicine, it includes links to full-text articles at several thousand journal web sites as well as to most of the articles in PubMed Central.

<http://pubmed.gov>

IMPORTANT NOTE: If you access PubMed via the Cornell University Library Catalog at <http://catalog.library.cornell.edu> or under Database Names, these routes provide automatic Kerberos authentication for connecting to Cornell-accessible full-text articles.

PubMed Unique Identifier (PMID) = is an accession number assigned to each cited article record added to PubMed MEDLINE shown on:

Summary and Abstract formats – PMID appears below each citation

Ex. PMID: 21349098 [PubMed - in process]
 PMID: 20384007 [PubMed - indexed for MEDLINE]

PubMed Central Identifier (PMCID) = is a unique identifier number preceded by PMC prefix for cited articles in PubMed Central shown on:

Summary format -- indicates Free PMC Article, but does not show PMCID number

Ex. PMID: 20856677 [PubMed - indexed for MEDLINE] **Free PMC Article**

Abstract format – PMCID is located below the abstract to right of PMID

Ex. PMID: 20856677 [PubMed - indexed for MEDLINE] PMCID: PMC2939897
 PMID: 21212270 [PubMed - in process] PMCID: PMC3059029 [Available on 2012/3/18]

Look for PubMed Central logos



MEDLINE format – the PMC field tag is near bottom of list

Ex. PMC - PMC2899698

PMCID's are added to PubMed MEDLINE as soon as the article or manuscript has been successfully processed in PubMed Central, usually around the time of publication.

When an article has been approved for publication or the final manuscript has been accepted, the peer review process has been completed by expert reviewers and journal editorial staff.

See Data Element (Field) codes and descriptors for PubMed records
<http://www.nlm.nih.gov/bsd/mms/medlineelements.html>

See **Abstract format** for list of standardized Medical Subject Headings (MeSH) and additional grant-related information in PubMed

+ **Publication Types, MeSH Terms, Substances, Grant Support**

Publication Types:

- [Research Support, N.I.H., Extramural](#)
- [Research Support, Non-U.S. Gov't](#)

MeSH Terms:

- [Alleles](#)
- [Animals](#)
- [Carrier Proteins/metabolism](#)
- [Chromosome Pairing/genetics](#)
- [Chromosomes, Mammalian/genetics*](#)

Substances:

- [Carrier Proteins](#)
- [Mlh3 protein, mouse](#)
- [Bloom syndrome protein](#)

Grant Support:

- [HD41012/HD/NICHD NIH HHS/United States](#)
- [R01 HD041012-09/HD/NICHD NIH HHS/United States](#)

PMID : PCMID Converter

<http://www.ncbi.nlm.nih.gov/sites/pmctopmid>

If you have one or more PubMed IDs (PMIDs), use this converter to obtain the corresponding PMCIDs and/or NIHMS IDs if they exist.

Enter one ID per line, enter several per line each separated by a space, or use the Clipboard feature

PMID to PMCID (or NIHMSID)
 PMCID to PMID

For more information: NLM Technical Bulletin. Skill Kit: PubMed Central ID and PubMed
http://www.nlm.nih.gov/pubs/techbull/so08/so08_skill_kit_pmcid.html

SEARCHING PubMed for PMCID's

A. Main PubMed Search Box

- For finding single or known citations

Enter 1-2 short unique elements (don't do any more typing than you need to)

e.g., authors last name first initial year
 authors last name first initial first page number
 authors last name first initial one subject keyword from title

The screenshot shows the PubMed.gov search interface. On the left is the logo for PubMed.gov, U.S. National Library of Medicine, National Institutes of Health. To the right is a search box with a dropdown menu set to 'PubMed'. Below the dropdown is a text input field containing 'hixon aj 2010'. To the right of the input field are two buttons: 'Search' and 'Clear'. Above the input field are links for 'RSS', 'Save search', 'Limits', 'Advanced search', and 'Help'.

If known, enter PMCID number to go directly to a PubMed MEDLINE record

The screenshot shows the PubMed.gov search interface. On the left is the logo for PubMed.gov, U.S. National Library of Medicine, National Institutes of Health. To the right is a search box with a dropdown menu set to 'PubMed'. Below the dropdown is a text input field containing 'pmc2863798'. To the right of the input field are two buttons: 'Search' and 'Clear'. Above the input field are links for 'Limits', 'Advanced search', and 'Help'.

- For subject searching, or combinations of authors, keywords, years, etc.

You can also search by combinations of subject or topic keyword(s)

e.g., influenza vaccine dogs

See *PubMed Searching : Veterinary Medicine* (brochure) for additional hints

When doing subject and/or author searches, consider the free full-text articles in *PubMed Central* presented on the right margin. Grant-supported articles may be listed.

72 free full-text articles in PubMed Central

Mutations at positions 186 and 194 in the HA gene of the 2009 H1N1 pandemic [Virol J. 2010]

Live attenuated influenza virus vaccines by computer-aided rational c [Nat Biotechnol. 2010]

Receptor specificity of influenza A H3N2 viruses isolated in mammalian cells and c [J Virol. 2010]

See all (72)...

B. PubMed Single Citation Matcher

PUBMED TOOLS (at bottom of PubMed opening page)

A handy tool for finding single PubMed citations with minimal information

<http://www.ncbi.nlm.nih.gov/pubmed/citmatch>

e.g., author's last name first initial year (or first page number, keyword)

PubMed Single Citation Matcher

- Use this tool to find PubMed citations. You may omit any field.
- Journal may be the full title or the title abbreviation.
- For first and last author searching, use smith jc format.

Journal:

Date: (month and day are optional)

Volume: Issue: First page:

Author name (see [help](#))

Only as first author Only as last author

Title words:

MORE RESOURCES (at bottom of PubMed opening page)

Journals in NCBI Databases

Shows listings of journals indexed in MEDLINE with source and publisher information

Browse MEDLINE Journals by broad subject terms

<http://wwwcf.nlm.nih.gov/serials/journals/index.cfm>

LinkOut : Linking to a World of Resources

LinkOut Journal (and Provider) Lists for full-text with years of coverage

Useful for finding ISSNs and publisher contact information

8,817 journals and 370 providers as of 5 April 2011

<http://www.ncbi.nlm.nih.gov/projects/linkout/>

USING PUBMED (at bottom on PubMed opening page)

PubMed Quick Start Guide

Brief tutorial and help in searching and using PubMed MEDLINE

<http://www.ncbi.nlm.nih.gov/books/NBK3827/>

PubMed Tutorial

<http://www.nlm.nih.gov/bsd/disted/pubmed.html>

My NCBI : NCBI's Personal Online Tool

Register one time; each person can have more than one My NCBI account or work space on an NIH server.

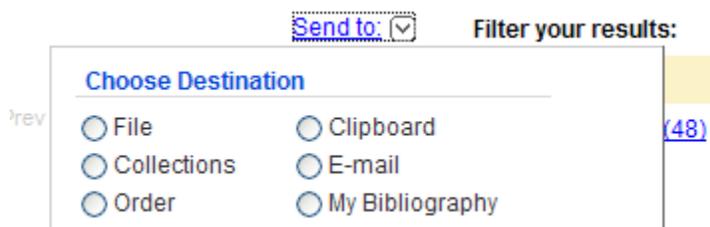
NCBI = National Center for Biotechnology information, a division of NIH and the National Library of Medicine, "to develop new information technologies to aid in the understanding of fundamental molecular and genetic processes that control health and disease".

www.ncbi.nlm.nih.gov

<http://www.ncbi.nlm.nih.gov/About/index.html>

- Connect to eRA : Electronic Research Administration
Use *My Bibliography* under a PD/PI's My NCBI account linked to his/her eRA account to create and maintain a file of personal professional bibliographies of journal articles, books, and book chapters

Citations can be added to *My Bibliography* from PubMed, PubMed Central, and the NIH Manuscript Submission System (NIHMS)



Color coded key helps grantees assemble their publications related to grant awards and track NIH Public Access Policy compliance

Login into My NCBI and My Bibliography from eRA account, or directly into My NCBI using a Commons user name and password.

<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-103.html>

- Save one or more search strategies for ongoing on-demand or automatically scheduled updates
- Set personal preferences
- Create filters to help narrow your search results
Numbers of results are itemized for each filter in upper right of PubMed *Summary* and *Abstract* results displays

Open your My NCBI account, select “Search Filters” on left sidebar to see a list of your currently active filters and add new filters
PubMed – Frequently Requested Filters

e.g., English
Full-text
Free full-text
Review

PubMed Central -- Frequently Requested Filters

PubMed Central (PMC) : A Free Archive of Life Sciences Journals

PMC is a free digital archive or repository of full-text, peer-reviewed biomedical and life sciences journal articles, including those with NIH-grant funding. It is developed and managed by the National Center for Biotechnology Information (NCBI). PMC contains nearly 2 million articles, most of which have a corresponding entry in PubMed.

<http://www.ncbi.nlm.nih.gov/pmc/>

Two types of publications are entered into PubMed Central in compliance with the NIH Open Access Policy:

Final Published Version (Method A & B)	Looks like print formatted journal page
Final Peer-Reviewed Manuscript (Method C & D)	MS Word document with figures converted to standard PubMed Central pdf format

Links are made between PubMed MEDLINE and PubMed Central as soon as PubMed Central processing has been completed.

PubMed Central Journals

List of journals that routinely deposit articles in PubMed Central and make their articles generally available there; there is no fee to deposit items in PMC.

<http://www.ncbi.nlm.nih.gov/pmc/journals/>

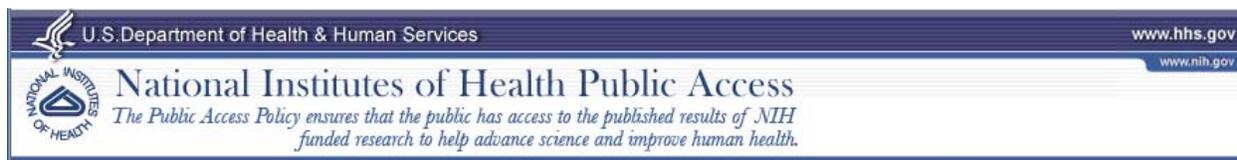
PMC Frequently Asked Questions (FAQs)

<http://www.ncbi.nlm.nih.gov/pmc/about/faq.html>

Searching PubMed Central

PubMed Central can be searched by journal title, author, or subject or topic keyword(s), or browsed by alphabetical PubMed Central Journal List.

See PubMed Central Help at <http://www.ncbi.nlm.nih.gov/books/NBK3826/>



National Institutes of Health Public Access -- Submission Methods

Table outlines the 4 Methods (A-D) regarding to whom and how to submit papers to PubMed Central in compliance with the NIH Public Access Policy.

http://publicaccess.nih.gov/submit_process.htm

The 4 methods for submitting papers and manuscripts to PubMed Central include:

METHOD A – Publisher automatically deposits all NIH-funded *final published articles* in PubMed Central (PMC) without author involvement.

Journals that Submit ALL NIH-Funded *Final Published Articles* to PubMed Central

These publishers submit the final published version of all NIH-funded articles no later than 12 months after publication.

http://publicaccess.nih.gov/submit_process_journals.htm

METHOD B – Author must ask the publisher to deposit a specific *final published article* in PubMed Central (PMC), often for a fee.

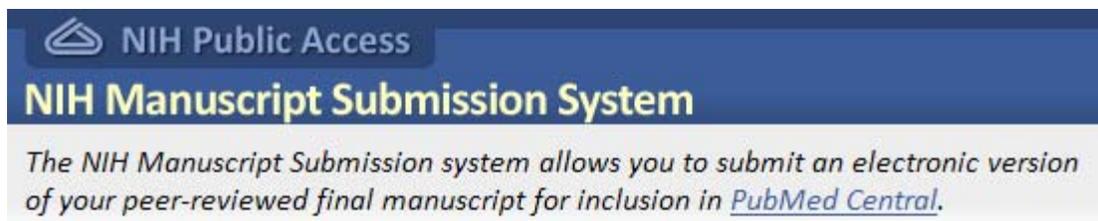
Publishers that will deposit a Specific *Final Published Article* in PubMed Central upon request.

http://publicaccess.nih.gov/select_deposit_publishers.htm

For Methods A & B, the following logo will appear in PubMed MEDLINE for Final Published Articles. Click on this logo to connect to the full text paper in PubMed Central.



METHOD C - If methods A and B are not appropriate or unavailable from the publisher, then one of the authors can submit an electronic version (usually Microsoft Word) of the peer-reviewed *final manuscript* for inclusion in PubMed Central, via the NIH Manuscript Submission System (NIHMS).



National Institutes of Health Manuscript Submission System (NIHMS)

<http://nihms.nih.gov/>

This process involves several steps and may take several weeks for complete processing and approvals by the author and before the PCMIID appears in PubMed MEDLINE

This 3+ task process involves: (all tasks must be completed within 3 months)

- Author (or designee) deposits/uploads MS Word document into NIHMS
- Author authorizes paper for PMC processing
 - PMC reformats document into standard PMC format
- Author approves PMC-reformatted version for public display
- PMC completes process; PCMIID is assigned and linked to *PubMed*

NIHMSID = a temporary ID number assigned when manuscripts are uploaded into NIHMS in order to track the progress in the three step process. This number disappears or becomes invalid 3 months after publication.

For Method C, the following logo will appear in PubMed MEDLINE for Final Manuscript Articles. Click on this logo to connect to the NIH standard formatted paper in PubMed Central.



An excellent 12-minute videoclip is available that covers the submission process. Connect from the submission page at http://publicaccess.nih.gov/submit_process.htm

For a video of this process, see [Submitting an Article to PubMed Central](#) (WMV Video - 12:01) ([Help Viewing Captions](#)).

METHOD D -- Complete the submission process for a *final peer-reviewed manuscript* that the publisher has deposited in the NIH Manuscript Submission System (NIHMS).

This is a variation on Method C. If a publisher deposits the final manuscript in the NIHMS, an author must complete the remaining tasks in order to add the PMC formatted version to *PubMed Central*.

An excellent 6-minute videoclip is available that covers the submission process. It is available from the submission page at http://publicaccess.nih.gov/submit_process.htm

For a video demonstrating author tasks on the NIHMS for Method D, see [Approving Submission of an Article to PubMed Central](#) (WMV Video - 6:26).

Additional assistance is available from:

NIHMS System Slide Show Help

<http://nihms.nih.gov/help/#slideshow>

Help and Frequently Asked Questions (FAQs)

<http://www.nihms.nih.gov/web-help/index.shtml>

Training and Communications

<http://publicaccess.nih.gov/communications.htm>

Include PMID in Citations

Citing NIH-sponsored articles in Proposals, Reports, Continuations

http://publicaccess.nih.gov/citation_methods.htm

NIH also requires that PMID's be added to citations when submitting NIH applications, proposals, continuation grants, progress and final reports, or other publications. This shows compliance with the NIH Open Access Policy.

The appropriate PMID location in literature citations varies depending on the application type. See the [Guide Notice NOT-OD-08-119](#) for details.

Include the PMID number at the end of each journal article citation.

- **Papers/manuscripts already in PubMed Central**

Hayward JJ, Dubovi EJ, Scarlett JM, Janeczko S, Holmes EC, Parris CR. Microevolution of canine influenza virus in shelters and its molecular epidemiology in the United States. *J Virol.* 2010 Dec;84(24):12636-45. PMID: PMC3004329

- **Papers/manuscripts NOT YET in PubMed Central**

If a PMID number has not yet been assigned, use the following notations depending upon the submission method:

Methods A & B, use "PMC Journal – In Process" if PMID is not yet available

Gladuli A, Moise NS, Hemsley SA, Otani NF. Poincaré plots and tachograms reveal beat patterning in sick sinus syndrome with supraventricular tachycardia and varying AV nodal block. *J Vet Cardiol.* 2011 Mar;13(1):63-70. PMID: PMC Journal - In Process

[a publication date within 3 months of when the application, proposal or report was submitted to NIH].

Methods C & D, Use the NIHMSID if article has not been published yet

Cerrato A, Parisi M, Santa Anna S, Missirlis F, Guru S, Agarwal S, Sturgill D, Talbot T, Spiegel A, Collins F, Chandrasekharappa S, Marx S, Oliver B. Genetic interactions between *Drosophila melanogaster* menin and Jun/Fos. *Dev Biol.* In press. NIHMSID: NIHMS44135

ADDITIONAL RESOURCES

Cornell University. Copyright Information Center

<http://www.copyright.cornell.edu/>

Cornell University Library. NIH Reporting

<http://www.library.cornell.edu/s/nihmandate.html>

Includes additional information about copyright agreements for authors.

Cornell University Library. New NIH Reporting Requirements

<http://www.library.cornell.edu/scholarlycomm/nihinfo.pdf>

Cornell University Library. Comments on Implementation of NIH Public Access Policy

http://www.library.cornell.edu/scholarlycomm/NIH%20Public%20Access%20Policy%20comments_Final.pdf

SHERPA/ RoMEO : Publisher Copyright Policies & Self-Archiving

<http://www.sherpa.ac.uk/romeo.php>

“Use this site to find a summary of permissions that are normally given as part of each publisher's copyright transfer agreement”.

Scholars Copyright Delayed Access Addendum

<http://scholars.sciencecommons.org/>.

The Addendum is a legal instrument that acknowledges any prior grants (including those required by funding agencies). It also provides you with other important rights, including the right to use your article in your own teaching and research, the right to build on the article in future publications, and the right to deposit the PDF version from the publisher with PMC. An online engine that generates the Addendum is found at <http://scholars.sciencecommons.org/>. Note that the engine currently creates an agreement with a six month delay; this can be changed manually if the journal insists on PMC delaying access for the full twelve months.

SPARC: the Scholarly Publishing and Academic Resources Coalition

An international alliance of academic and research libraries working to correct imbalances in the scholarly publishing system developed by the Association for Research Libraries.

<http://www.arl.org/sparc/index.shtml>

SPARC Author Addendum

<http://www.arl.org/sparc/author/>

Compiled by

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NIH Manuscript Submission for Deposit in PubMed Central and Access via PubMed MEDLINE

<http://publicaccess.nih.gov>

FINAL PUBLISHED ARTICLE

Method A

Publisher automatically deposits article within 12 months of publication

Method B

Publisher deposits article when requested by author



→ **PMCID** →



<http://www.ncbi.nlm.nih.gov/pmc/>

Digital repository for various FULL-TEXT life sciences JOURNAL ARTICLES and formatted MANUSCRIPTS

<http://pubmed.gov/>

“Master Index” database of CITATIONS and ABSTRACTS to the biomedical literature

20 million citations from 1940’s

FINAL PEER-REVIEWED MANUSCRIPT



<http://nihms.nih.gov/>

↑
Temporary
NIHMSID

Method C

Author deposits manuscript
Author approves reformatted manuscript

Method D

Publisher deposits manuscript
Author approves reformatted manuscript

2 million published articles and manuscripts from about 2000

All NIH-sponsored research papers since April 2008

PCMIDs and links are added to *PubMed* citations as soon as the peer-reviewed published article or manuscript has been processed for *PubMed Central*.

To Locate PCMIDs in PubMed:

Search *PubMed* by author, date, etc. (or use Single Citation Matcher)

PCMIDs appear on:
Abstract display under abstract to the right with any availability date limits
MEDLINE display has PMC tag

Also, **PMID:PCMID Converter**
<http://www.ncbi.nlm.nih.gov/sites/pmctopmid>