

Bookshelf Help

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National Center for Biotechnology Information (US), Bethesda (MD)

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Bookshelf, the books division of the NLM Literature Archive (LitArch) at the National Center for Biotechnology Information (NCBI), is an online searchable collection of books, reports, databases, and other scholarly literature in biology, medicine, and the life sciences. This documentation describes the Bookshelf project and features for accessing the literature and addresses some commonly asked questions.

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Introduction

Created: September 30, 2010; Updated: January 15, 2021.

Bookshelf is an online searchable collection of more than 9000 books, reports, databases, and other scholarly literature in biology, medicine, and the life sciences developed and managed by the [National Center for Biotechnology Information \(NCBI\)](#) in the [National Library of Medicine \(NLM\)](#) at the [National Institutes of Health](#).

As the books division of the [NLM Literature Archive \(NLM LitArch\)](#), the digital repository of full-text literature, Bookshelf serves not only to preserve and maintain free access to electronic biomedical literature, but through its integration with other NCBI resources, such as [PubMed](#), [Gene](#), [OMIM](#), and [PubChem](#), it fosters both intentional and serendipitous discoveries.

Each publication on Bookshelf is divided into searchable units of content based on the organization of parts, chapters, sections, subsections, etc, within the individual publication. The entry-point for a user is a page within the book usually found by a search.

Once browsing this book page, it is possible to navigate around a whole unit of content. The size of the unit of content and its interconnection with other parts of the book will depend on both the organization of the book and the wishes of the publisher.

Searching Bookshelf

You may search across all content, or one book at a time in Bookshelf. To search across the entire Bookshelf resource, type a word or phrase into the **Search** box at the top of the [Bookshelf homepage](#) and click **Search**. You may search one book at a time by selecting a book listed on the [Browse Titles](#) page. Simply click on the book's cover or hyperlink to view the **Table of Contents** page. There is a **Search this book** box located under the book's metadata and cover thumbnail. Enter one or more terms to query the book. Your search results will be displayed on a separate page and organized by **Relevance**. To query the entire Bookshelf again, use the **Search** box set to 'Books' at the top of the screen (See [Searching Bookshelf](#) for more information).

Browsing versus Searching

Browsing allows you to "click your way" through a Bookshelf publication. Searching, on the other hand, requires the user to enter a search term to retrieve books that contain the specific term. Every publication in Bookshelf is fully searchable, but not all publications can be browsed. Browsable publications include a hyperlinked **Table of Contents**, allowing you to view the publication chapter by chapter. All books created at the National Library of Medicine (NLM) and by the National Center for Biotechnology Information (NCBI) are browsable. Books that cannot be browsed are accessible by using the **Search this book** box on the book's Table of Contents page. Whether books are browsable depends on agreements made with the publishers.

Integration with Other NCBI Databases

Through links to other resources at NCBI, such as [PubMed](#), [PMC](#), [PubChem Substance](#), [Gene](#), and [OMIM](#), Bookshelf enables readers to discover relevant biomedical information (see [Figure 1](#)). A number of full-text books, reports and databases hosted in Bookshelf can be accessed through links in their corresponding entry in [PubMed](#), a database of citations and abstracts for journal articles, books and documents (see the [NLM Technical Bulletin](#) for more information). PubMed and Bookshelf are also interlinked by 1) links in PubMed to publications in Bookshelf that have cited a PubMed citation in their bibliography, and 2) links to PubMed citations from articles cited in publications on Bookshelf.

StemBook [Internet]. < Prev Next > PubReader format: click here to try

StemBook > Show details Contents

Search this book

Mouse models of graft-versus-host disease*

Pavan Reddy and James LM Ferrara.
 > Author Information
 Published February 28, 2009.

Introduction

Allogeneic hematopoietic cell transplantation (HCT) represents an important therapy for many hematological and some epithelial malignancies and for a spectrum of nonmalignant diseases (Appelbaum, 2001). The development of novel strategies such as donor leukocyte infusions (DLI), nonmyeloablative HCT and cord blood transplantation (CBT) have helped expand the indications for allogeneic HCT over the last several years, especially among older patients (Welniak et al., 2007). However, the major toxicity of allogeneic HCT, Graft-Versus-Host disease (GVHD), remains a lethal complication that limits its wider application (Ferrara and Reddy, 2005). Depending on when it occurs after HCT, GVHD can be either acute or chronic (Deeg, 2007; Weiden et al., 1979; Weiden et al., 1981; Lee, 2005). Acute GVHD is responsible for 15% to 40% of mortality and is the major cause of morbidity after allogeneic HCT, while chronic GVHD occurs in up to 50% of patients who survive three months after HCT. **Mouse models** have provided the majority of insights into the biology of this complex disease process.

The GVHD reaction was first noted when irradiated mice were infused with allogeneic marrow and spleen cells (van Bekkum and De Vries, 1967). Although mice recovered from radiation injury and marrow aplasia, they subsequently died with "secondary disease" (van Bekkum and De Vries, 1967), a syndrome that causes diarrhea, weight loss, skin changes, and liver abnormalities. This phenomenon was subsequently recognized as GVHD disease (GVHD). Three requirements for the developing of GVHD were formulated by Billingham (Billingham, 1966-1967). First, the graft must contain immunologically competent, now recognized as mature T cells. In both experimental and clinical allogeneic BMT, the severity of GVHD correlates with the number of transfused donor T cells (Kernan et al., 1986; Korngold et al., 1987). The precise nature of these cells and the mechanisms they use are understood in greater detail (discussed below). Second, the recipient must be incapable of rejecting the transplanted cells (immunocompromised). A patient with a normal immune system will usually reject cells from a foreign donor. In allogeneic BMT, the recipients are usually immunosuppressed with chemotherapy and/or radiation before stem cell infusion (Welniak et al., 2007). Third, the recipient must express tissue antigens that are not present in the transplant donor. This area has been the focus of intense research that has led to the discovery of the major histocompatibility complex (MHC; Petersdorf and Malkki, 2006). Human leukocyte antigens (HLA) are proteins that are the gene products of the MHC and that are expressed on the cell surfaces of all nucleated cells in the human body. HLA proteins are essential to the activation of allogeneic T cells (Petersdorf and Malkki, 2006; Krensky et al., 1990) discussed below. This chapter on **mouse models** of acute GVHD will place the immuno-biological mechanisms of Billingham's postulates in perspective.

In addition to these seminal postulates on GVH reaction, the critical requirement of immune cells from the donor graft for optimal leukemia/tumor elimination: a process called graft-versus-leukemia (GVL) effect, and its tight link with GVHD were initially made from **mouse models** (43). Other **models** such as the canine, nonhuman primate, and rat **models** also played important roles, particularly in the development of clinically used immuno-suppressants. Nonetheless, the presence of well-characterized in-bred strains, availability of knock-out and transgenic animals, easy availability of reagents, and the relative low cost have made **mouse models** the most utilized systems for investigating the mechanisms of GVH responses.

Views
 PubReader
 Print View
 Cite this Page
 PDF version of this page (274K)

In this Page
 Introduction
 Mouse models
 Immunobiology
 Conclusion
 References

Related information
 PMC
 PubMed
 Gene

Related citations in PubMed
 Human and murine cutaneous graft-versus-host diseases. Potential models for the study of immunologi [Br J Dermatol. 1984]
 Review Progress in acute graft versus host disease. [Curr Opin Hematol. 2007]
 Review Minor transplantation antigens: mouse models for human host-versus-graft, graft-ver [Arch Immunol Ther Exp (Warsz). 1998]
 Increased intestinal permeability in rats with graft versus host disease. [Gut. 1996]
 Overexpression of tissue inhibitor of metalloproteinases-3 in intestinal and cutaneous lesions of graft-versus [Mod Pathol. 2003]
 See reviews...
 See all...

Figure 1. Among the discovery panels located along the right margin of a book page are those displaying links to PubMed and other NCBI resources. **A)** "Related Information" provides links to other databases at NCBI, such as PMC, PubMed Substance, Gene and OMIM. **B)** Links to related PubMed abstracts can be found in the "Related citations in PubMed" panel.

Copyright, Permissions, and Conditions of Use

Some of the information found in Bookshelf is provided by non-government authors and publishers, and as such is copyright protected. Since NCBI does not control the copyright for these books, you must contact the author or publisher to obtain permission before reproducing any material found in such publications. Such books are identified on Bookshelf web pages by the presence of the copyright symbol (©) at the bottom of the webpage. For more information, see the [Bookshelf Copyright Notice](#).

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Crawlers and other automated processes may NOT be used to systematically retrieve content from the Bookshelf web site, and bulk downloading of books is prohibited. Bookshelf does have two auxiliary services, the [NLM LitArch OAI service](#) and [NLM LitArch FTP service](#), that may be used to download certain content in bulk.

Information for Authors and Publishers

Bookshelf strives to represent the range of biomedical, health, and life sciences books and resources available to scientists, health professionals, educators, students, and consumers. Specialist research, resources for university-level teaching, works on methods and procedures, and clinical reports and guidelines are all included. See Bookshelf's [Information for Authors and Publishers](#) page about how to propose a publication, the review process, and the submission of data.

Quick Start Guide

Created: September 30, 2010; Updated: August 27, 2013.

From Bookshelf's [Browse Titles](#) page you may view all of Bookshelf's titles by title, first author/editor, publisher, publication year or type, or begin searching across the entire resource. You may browse and search across all content, or one book at a time.

By clicking on a book's cover image or hyperlinked title, you may access an individual publication's Table of Contents page, from which you can begin browsing or searching the contents of that particular book.

Search results will be displayed on a separate page and organized by relevance (see [Displaying Your Search Results](#)).

For a quick look at Bookshelf and its features, also visit the [Tutorials](#) page.

Search Tips

You may search Bookshelf like any other NCBI database, namely by

- searching on any word
- restricting the search term to a certain field using Facets
- using the Advanced Search option to search multiple fields, or
- applying filters to properties.

Here are some representative searches:

Find books by...	Search text
free text	mood sleep disorders
author	alberts[au]
editor	pagon[ed]
title	Lactose Intolerance[Title]
publisher	National Academies Press[Publisher]
ISBN	0-8153-3218-1[ISBN]
publication date (year)	2010[Year of publication]

See [Advanced Searching](#) for more information about building specialized searches, viewing your search history, saving search results and viewing search details.

Browsing Bookshelf

Created: September 30, 2010; Updated: February 18, 2014.

From the Bookshelf Homepage

Browsing allows you to “click your way” through Bookshelf and its publications. From the [Bookshelf homepage](#), you may browse [New & Updated](#) content and [Featured Titles](#). [New & Updated](#) includes new books and resources added to Bookshelf and books and resources on Bookshelf that have been recently updated with a new chapter. Click on “See more...” to access the full [New & Updated](#) list and additional information about these titles, such as the date new books or chapters were added to Bookshelf. By clicking on a book’s cover image or hyperlinked title, you may access its [Table of Contents](#) page (see Figure 1).

To return to the Bookshelf homepage from any page of a publication, click on “Bookshelf” in the top left corner.

From the Browse Titles Page

You may begin browsing the contents of the entire Bookshelf via the [Browse Titles](#) page, which allows you to view and sort contents by title or publication date (see Figure 2, and [Browsing Tutorial video](#)). To narrow the list of titles by particular terms in the titles and/or contributors, enter one or more terms in the “Filter term” box and click the [Go](#) button. Or you may filter the list by clicking on the types of resource, publishers that interest you (see Figure 3), or versions/editions of publications. By default only current titles in Bookshelf will display on the Browse Titles page. To view all titles in Bookshelf, including previous versions or editions, or content that is no longer considered current by its authors/publisher, you must select “Include previous versions/editions” in the [Versions/Editions](#) panel (see Figure 3).

To temporarily send titles to the clipboard so that you can come back to them later, use the check boxes to select titles, click on the [Send to](#) link, and select [Clipboard](#). If no check boxes are selected, the first 500 titles displaying will be sent to the clipboard.

You may also save titles to a text file, CSV file, or e-mail them by clicking on the [Send to](#) link, and selecting [File](#) to save as a text or CSV file or [E-mail](#) to send them to a particular e-mail address. You may either select to send particular titles listed by using the check boxes, or have the first 1000 displayed titles saved in a text file or e-mailed (see Figure 4a).

For more information about using the clipboard, saving as a text file and e-mailing results, see [Saving and E-mailing Results and Searches](#).

If you’d like to save a particular page of displayed titles, such as the entire list of contents, or a list of contents filtered by a term or one or more categories, click on [Save Link](#). You may then copy the provided link to this page, and paste it to your browser to bookmark it, or send it to others to save (see Figure 4b).

By clicking on a book’s cover thumbnail or hyperlinked title, you may access its [Table of Contents](#) page (see Figure 1). Many publications are also available in PDF format, so you can download a copy to your computer.

From a Publication’s Table of Contents

Each publication on Bookshelf is divided into searchable units of content based on the organization of parts, chapters, and sections within the individual publication. These units of content are listed under the [Contents](#) section of the [Table of Contents](#) page. You can expand or collapse all of the main units of [Contents](#) by using the [Expand All](#) and [Collapse All](#) links on the [Table of Contents](#) page (see Figure 1).

The screenshot shows the NCBI Bookshelf interface for the book "Dynamics of Cancer" by Steven A. Frank. The page is annotated with callouts A through J:

- A:** Points to the "Bookshelf" link in the top left navigation bar.
- B:** Points to the "PMID: 20821846" link at the bottom of the page.
- C:** Points to the "Princeton University Press" link in the publisher information.
- D:** Points to the "Copyright and Permissions" link.
- E:** Points to the "Search this book" input field.
- F:** Points to the "Contents" section on the left side of the page.
- G:** Points to the "Expand All" link below the contents.
- H:** Points to the "Views" panel on the right side of the page.
- I:** Points to the "Related citations in PubMed" panel on the right side of the page.
- J:** Points to the "Next >" button at the top right of the page.

The page content includes the book title "Dynamics of Cancer: Incidence, Inheritance, and Evolution" by Steven A. Frank, published by Princeton University Press in 2007. It also features a "Contents" table of contents with chapters from Introduction to Conclusions, a "Views" panel with options like PubReader, Print View, and PDF version, and a "Related citations in PubMed" panel listing related research articles.

Figure 1. Table of Contents page of a browsable book. **A)** Clicking on “Bookshelf” at the top left corner of the page will return you to the Bookshelf homepage. **B)** The hyperlinked PMID number will take you to a publication’s corresponding citation in PubMed. **C)** You can access a publisher website by clicking on the publisher’s link. **D)** For information about requesting permission to use copyrighted material, click on the Copyright Notice link to access the copyright statement (also available at the bottom of the page). **E)** To search within a book use the **Search this book**. **F)** If the publication is browsable, the **Contents** will be hyperlinked, allowing you to view the publication chapter by chapter. **G)** To expand or collapse the entire **Contents** of a publication, use these links. **H)** The “Views” panel contains a PubReader link to a reader-friendly version of any page of a browsable book designed primarily for tablets and other small screen devices, a Print View link to a print friendly version of any page of a browsable book, a Cite this Page link to the citation for the book or resource (based on **NLM style**), and a link to a PDF version of the title. **I)** Links to related PubMed abstracts can be found in the “Related citations in PubMed” panel on right. **J)** The Next button will take you to the first page of the book’s contents.

If the publication is browsable, the **Contents** will be hyperlinked, allowing you to view the publication chapter by chapter. If a publication is not browsable, there will be a notification on the publication’s pages. Whether publications are browsable depends on agreements made with the publishers. Publications that cannot be browsed are accessible by using the **Search this book** box on a page of that publication or by querying the Bookshelf (see Figure 5). Most publications on Bookshelf (> 95%) are fully browsable.

The screenshot shows the NCBI Bookshelf interface. At the top, there are navigation links for 'NCBI Resources' and 'How To'. The main header includes 'Bookshelf', a search box with 'Books' selected, and a 'Search' button. Below the header, there's a 'Browse Titles' section with a filter term input field and a dropdown menu set to 'Title or Contributor'. A 'Sort by' dropdown menu is open, showing three options: 'Title' (unselected), 'Pub Date' (selected), and 'Reverse' (unselected). An orange box highlights the 'Sort by' menu, and a red circle with a blue 'A' is next to it. The background shows a list of search results with titles like 'Diagnosis and Treatment of Obstructive Sleep Apnea in Adults [Internet]' and 'Common Syndromes in Older Adults Related to Primary and Secondary Prevention [Internet]'.

Figure 2. Sorting the Browse Titles page. Bookshelf's titles are by default sorted by publication date, with the most recent titles at top. To alphabetically sort contents by title, click on the Display Settings link, change the selection to Title, and click on Apply. To sort by reverse publication date (so that oldest titles appear at top), select both Pub Date and Reverse. To sort by reverse alphabetical order, select both Title and Reverse (A).

When navigating through the pages of a browsable publication, you can view the publication's hyperlinked **Contents** or return to the **Table of Contents** page by clicking on the **Contents** drop-down menu (see Figure 6, and Inside a Book Tutorial video).

From within a Page

Once you have landed on a particular page of content, such as a chapter, via a search query, your search terms will be bolded or highlighted if this is selected in your **My NCBI preferences**. Your particular search terms will remain bolded or highlighted until you've conducted a new search query, you change your My NCBI settings to not highlight search terms, or the next day.

You can browse the main sections of a page by looking at the hyperlinked **In this Page** section. It is also possible to quickly navigate from section to section within a chapter by clicking on the **Go to** drop-down menu (see Figure 7, and Inside a Book Tutorial video).

The screenshot displays the NCBI Bookshelf interface. At the top, there are navigation links for 'Resources' and 'How To', and user options for 'lathrops', 'My NCBI', and 'Sign Out'. The main header includes the 'Bookshelf' logo, a dropdown menu set to 'Books', a search input field containing 'cancer', and a 'Search' button. Below the search bar are links for 'Limits' and 'Advanced search', and a 'Help' link.

The 'Browse Titles' section features a filter input field with 'cancer' and a 'Go' button (A). To the right of the search bar is a 'Reset' button (E). Below the search bar, the text '20 of 55 Titles for "cancer"' (B) is displayed, along with a 'Show All Titles' link. On the left side, there are three filter menus: 'Subjects' (C), 'Types', and 'Publishers'. The 'Subjects' menu lists categories like 'All Subjects', 'Health Care (46)', 'Evidence-based Medicine (23)', 'Comparative Effectiveness Research (9)', 'Health Policy (5)', and 'Cancer (4)'. The 'Types' menu lists 'All Types', 'Report (51)', and 'Book (4)'. The 'Publishers' menu lists 'Agency for Healthcare Research and Quality (US) (39)', 'National Collaborating Centre for Cancer (UK) (6)', 'National Academies Press (US) (5)', 'American College of Medical Genetics (1)', and 'BC Decker (1)'. A 'Display Settings' box (D) is open, showing checkboxes for 'Cancer (4)', 'Comparative Effectiveness ... (9)', 'Evidence-based Medicine (23)', 'Genetics (1)', 'Health Care (46)', 'Health Policy (5)', and 'Medicine (3)'. The 'Genetics (1)' checkbox is checked. An 'Apply' button is visible in the top right of this box. At the bottom left, the 'Versions/Editions' panel (F) is visible, with 'Current titles in Bookshelf' selected and 'Include previous versions/editions' as an option.

Figure 3. Filtering the Browse Titles page. To narrow the list of Bookshelf titles, enter one or more terms in the “Filter term” box and click the **Go** button (A). The total number of titles containing that term will appear at the top of the page (B). Click on the **Show All Titles** link if you want to display all titles in the list, automatically sorted by publication date. To filter the list by subjects, type of resource, or publishers, click on one or more options (C) available in these menus. The total number of titles will appear in parentheses for each subject, type or publisher, with those containing the most titles appearing at top. Click on the **More** button in each filter box to get the complete set of available subjects, types or publishers, sorted alphabetically. Use the check boxes to select one or more options in the box, and press the **Apply** button to filter by them (D). To clear filters and reset page to the default, click the **Reset** button (E). By default only current titles in Bookshelf will appear when you use the Browse Titles page. To include previous versions or editions of titles, or titles no longer considered current by their authors or publishers, select “Include previous versions/editions” in the **Versions/Editions** panel (F).

If the publication is browsable, you can use the **Contents** drop-down menu (see Figure 6) at the top and bottom of the page to click on another part, chapter or section you would like to view.

To return to the publication’s **Table of Contents** page, click on the **Table of Contents** link at the top right of the **Contents** drop-down menu or under the book details. You can also return to the **Table of Contents** page by clicking on the publication’s cover thumbnail. To return to the Bookshelf homepage, click on “Bookshelf” in the top left corner (see Figure 7).

NCBI Resources How To lathrops My NCBI Sign Out

Bookshelf Books Search Limits Advanced search Help

Browse Titles

Select a category or enter filter term below.

Filter term: genetics in Title or Contributor Go Reset

Display Settings: Sorted by Pub Date Send to: Save Link:

Subjects

- All Subjects
- Genetics (2)
- Medicine (2)
- Microbiology (1)
- Molecular Biology (1)

More

Types




- All Types
- Book (3)

Publishers

- All Publishers
- ASM Press (1)
- Remedica (1)
- Wiley-Liss (1)

More

3 of 3 Titles for "genetics"

-  [Genetics for Surgeons.](#)
Morrison PJ, Spence RAJ.
London: Remedica; 2005.
Book | Genetics, Medicine
-  [Helicobacter pylori: Physiology and Genetics.](#)
Mobley HLT, Mendz GL, Hazell SL, editors.
Washington (DC): ASM Press; 2001.
Book | Microbiology, Medicine
-  [Human Molecular Genetics. 2nd edition.](#)
Strachan T, Read AP.
New York: Wiley-Liss; 1999.
Book | Genetics, Molecular Biology

Choose Destination

- File
- Clipboard
- E-mail

Figure 4a. Saving and e-mailing browsed titles. Click on the Send to link to send all titles displayed on a page to a text file, e-mail address or the clipboard (A). Use the check boxes to select just one or more titles displayed on the list to send to one of the destinations.

NCBI Resources How To lathrops My NCBI Sign Out

Bookshelf Books Search Limits Advanced search Help

Browse Titles

Select a category or enter filter term below.

Filter term: genetics in Title or Contributor Go Reset




Subjects
 All Subjects
 Genetics (2)
 Medicine (2)
 Microbiology (1)
 Molecular Biology (1)
 More

Types
 All Types
 Book (3)

Publishers
 All Publishers
 ASM Press (1)
 Remedica (1)
 Wiley-Liss (1)
 More

Display Settings: Sorted by Pub Date Send to: Save Link:

3 of 3 Titles for "genetics"

-  [Genetics for Surgeons.](#)
 Morrison PJ, Spence RAJ.
 London: Remedica; 2005.
 Book | Genetics, Medicine
-  [Helicobacter pylori: Physiology and Genetics.](#)
 Mobley HLT, Mendz GL, Hazell SL, editors.
 Washington (DC): ASM Press; 2001.
 Book | Microbiology, Medicine
-  [Human Molecular Genetics. 2nd edition.](#)
 Strachan T, Read AP.
 New York: Wiley-Liss; 1999.
 Book | Genetics, Molecular Biology

Link to this page
<http://www.ncbi.nlm.nih.gov/books/browse/?>

Figure 4b. Saving the link of a page of filtered titles. Click on the Save Link to get the link to the page with your filtered results (A).

NCBI Resources How To Sign in to NCBI

Booksshelf Books Search

Browse Titles Limits Advanced

A By agreement with the publisher, this book is accessible by the search feature, but cannot be browsed.

Molecular Biology of the Cell, 4th edition
 Bruce Alberts, Alexander Johnson, Julian Lewis, Martin Raff, Keith Roberts, and Peter Walter.
 New York: [Garland Science](#); 2002.
 ISBN-10: 0-8153-3218-1 ISBN-10: 0-8153-4072-9
[Copyright and Permissions](#)

B Search this book

Excerpt
Molecular Biology of the Cell is the classic in-depth text reference in **cell biology**. By extracting fundamental concepts and meaning from this enormous and ever-growing field, the authors tell the story of **cell biology**, and create a coherent framework through which non-expert readers may approach the subject. Written in clear and concise language, and illustrated with original drawings, the book is enjoyable to read, and provides a sense of the excitement of modern **biology**. **Molecular Biology of the Cell** not only sets forth the current understanding of **cell biology** (updated as of Fall 2001), but also explores the intriguing implications and possibilities of that which remains unknown.

C

Contents

Acknowledgments
 Preface
 A Note to the Reader
 Part I. Introduction to the Cell
 Part II. Basic Genetic Mechanisms
 Part III. Methods
 Part IV. Internal Organization of the Cell
 Part V. Cells in Their Social Context
 Glossary

[Expand All](#) [Collapse All](#)

Views
 Cite this Page

Recent Activity
 Turn Off Clear

- Molecular Biology of the Cell Bookshelf
- molecular biology of the cell (5982) Books
- Dynamics of Cancer Bookshelf
- dynamics of cancer (628) Books
- results (52755) Books

[See more...](#)

[Expand All](#) [Collapse All](#)

Figure 5. Table of Contents page of a non-browsable book. A) Non-browsable books are indicated with a notice at the top of the page; C) their Contents will not be hyperlinked so you cannot view the publication chapter by chapter. B) Although these books cannot be browsed, they are searchable by using the **Search this book** box under details about the book.

NCBI Resources How To Sign in to NCBI

Bookshelf Books Search

Browse Titles Limits Advanced Help

Dynamics of Cancer: Incidence, Inheritance, and Evolution. < Prev Next >

PubReader format: click here to try

Contents

Chapter 2

Perturbations of cancer to the incidence pattern... The first section... The second section... The third section... The fourth section...

- Chapter 1. Introduction
 - 1.1 Aims
 - 1.2 How to Read
 - 1.3 Chapter Summaries
- Part I. Background
 - Chapter 2. Age of Cancer Incidence
 - 2.1 Incidence and Acceleration
 - 2.2 Different Cancers
 - 2.3 Childhood Cancers
 - 2.4 Inheritance
 - 2.5 Carcinogens
 - 2.6 Sex Differences
 - 2.7 Summary
 - Chapter 3. Multistage Progression
 - 3.1 Terminology
 - 3.2 What Is Multistage Progression?
 - 3.3 Multistage Progression in Colorectal Cancer
 - 3.4 Alternative Pathways to Colorectal Cancer
 - 3.5 Changes during Progression
 - 3.6 What Physical Changes Drive Progression?
 - 3.7 What Processes Change during Progression?
 - 3.8 How Do Changes Accumulate in Cell Lineages?
 - 3.9 Summary

Table of Contents Page

Views

- PubReader
- Print View
- Cite this Page
- PDF version of this title (3.0M)

In this Page

- 2.1 Incidence and Acceleration
- 2.2 Different Cancers
- 2.3 Childhood Cancers
- 2.4 Inheritance
- 2.5 Carcinogens
- 2.6 Sex Differences
- 2.7 Summary

Recent Activity

Turn Off Clear

Your browsing activity is empty.

Figure 6. Contents drop-down menu. **A)** When navigating through the pages of a browsable publication, you can view the publication's hyperlinked **Contents** by clicking on the **Contents** drop-down menu. **B)** To return to the **Table of Contents** page, click on the link at the top right of the menu.

NCBI Resources How To Sign in to NCBI

Bookshelf Books Search

Browse Titles Limits Advanced Help

C **Dynamics of Cancer: Incidence, Inheritance, and Evolution.** < Prev Next >

Show details Contents

Search this book

Chapter 8 Genetics of Progression

Genes affect cancer to the extent that they alter age-specific incidence. Thus, the most powerful empirical analysis compares age-specific incidence between normal and mutated genotypes. This chapter describes comparative studies between genotypes.

The first section compares mutant and normal genotypes in human populations. I begin with the classic study of **retinoblastoma**. An inherited mutation in the *Rb* gene causes a high incidence of bilateral retinal tumors. Individuals who do not inherit a mutation suffer rare unilateral tumors. The age-specific acceleration of unilateral cases is one unit higher than the acceleration of bilateral cases, consistent with the prediction that most of the individuals who suffer bilateral **retinoblastoma** were born advanced by one stage in progression because of an inherited mutation.

A similar comparison between inherited and sporadic cases of colon cancer shows that the sporadic cases have an acceleration approximately one unit greater than inherited cases. The decrease in acceleration for individuals who inherit a mutation to the *APC* gene supports the hypothesis that such mutations cause their carriers to be born one stage advanced in progression.

The second section compares incidence between different genotypes in laboratory animals. The controlled genetic background makes clearer the causal role of particular mutations in shifting age-specific incidence. I describe the quantitative methods needed to test hypotheses with the small sample sizes commonly obtained in lab studies. I then present a full analysis of one example: the change in age-specific incidence and acceleration between four genotypes with different knockouts of DNA mismatch repair genes. Knockouts that cause a greater increase in mutation rate had earlier cancer onset and a lower age-specific acceleration. The lower acceleration suggests some hypotheses about how the mismatch repair mutations affect the rate of cancer progression.

The third section compares breast cancer incidence between human groups classified by the age at which a first-degree relative developed the disease. The earlier the age of onset for the affected first-degree relative, the faster the rate of progression. Those who progressed more quickly appeared to have an inherited polygenic predisposition. Greater polygenic predisposition was associated with lower age-specific acceleration. I discuss various hypotheses about why such predisposition may increase incidence and reduce acceleration.

8.1 Comparison between Genotypes in Human Populations

Comparisons between sporadic and inherited cancers provide powerful support for multistage theory. With new genomic techniques, comparison of age-specific incidence between human groups with different genotypes will become increasingly accomplish. So, it is important to have a clear sense of what has already been done and what can be learned in the future.

Retinoblastoma

Bilateral **retinoblastoma**, in which tumors develop in both eyes, is an inherited disease. Most unilateral cases occur sporadically. [Knudson \(1971\)](#) predicted that bilateral cases follow age-specific patterns consistent with one inherited mutation (hit) and for only one somatic hit to produce a tumor. By contrast, Knudson predicted that unilateral cases require two somatic hits to produce a tumor.

D **PubReader format: click here to try**

D Views

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A **In this Page**

- 8.1 Comparison between Genotypes in Human Populations
- 8.2 Comparison between Genotypes in Laboratory Populations
- 8.3 Polygenic Heterogeneity
- 8.4 Summary

E Recent Activity

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retinoblastoma (580)

Books

Genetics of Progression - Dynamics of Cancer

Bookshelf

See more...

B Go to:

- 8.1 Comparison between Genotypes in Human Populations
- 8.2 Comparison between Genotypes in Laboratory Populations
- 8.3 Polygenic Heterogeneity
- 8.4 Summary

Figure 7. Chapter page. **A)** You may browse a chapter's main sections by looking at the hyperlinked **In this Page** section on the chapter page. **B)** It is also possible to quickly navigate from section to section within a chapter by clicking on the **Go to** drop-down menu. **C)** To return to the publication's **Table of Contents** page, click the publication's cover thumbnail. **D)** The **PubReader** link in the "View" panel directs to a reader-friendly version of the page designed primarily for tablets and other small screen devices, and the **Cite this Page** link provides a citation for the chapter or part (based on **NLM style**). **E)** Search terms are bolded or highlighted on a page if you have selected this as a **My NCBI preference**.

Searching Bookshelf

Created: September 30, 2010; Updated: February 11, 2019.

You may search across all content, or one book at a time in Bookshelf. To search across the Bookshelf, type a word or phrase into the Search box at the top of the [Bookshelf homepage](#) and click **Search** (see Search Tutorial video). The content of the Books database is searched, and a results page will be displayed according to the number of items found. Previous versions or editions of content in Bookshelf, and content that is no longer considered current by its authors/publisher, are only included in the search results when selected using the Facets function. See the Facets and Advanced Search sections for creating other specialized searches.

You may search one book at a time by selecting a book from the list of titles on the [Browse Titles](#) page. Simply click on the book's cover image or hyperlink to view the **Table of Contents** page. There is a **Search this book** box located under the book's title and details. Enter one or more terms to query the book. Your search results will be displayed on a separate page and **Sorted by Relevance** (See Displaying Your Search Results for more information, including additional sorting options). If the book has an "Archive" watermark on its pages, or a link at top of the page to a more recent version or edition in Bookshelf, then it will not be searchable unless you select to include previous versions or editions in the search results using the Facets search function.

Facets

You can limit your search by previous versions or editions, publication year, dates, resource type, and specific search fields by following these steps:

1. Choose from any of the filters available on the left side of the search results page.
2. To access specific search fields, click the **Show additional filters link**, select **Search fields**, and press **Show**. Then press **Choose** under **Search fields** at the bottom of the filters menu. Select a search field and click "Apply" to refine your search.
3. If necessary, make changes to the search terms in the search box or enter a new search term.
4. Click **Search**.
5. To clear specific search fields, select **Clear** next to the field you would like to eliminate. To clear all filters, click **Clear all** at the bottom of the filters menu.

Note: When **Filters** are selected, a **Filters Activated** message will display on the results page. To turn off **Filters** click **Clear all**.

For an example of how to use this feature, see the Using Facets Tutorial video.

Previous versions or editions

Previous versions or editions of content in Bookshelf, or content that is no longer considered current by its authors/publisher, will not be included in search results or be searchable unless you select this option.

Publication Date

To limit your search results by a book or resource's publication date, choose one of the specific year options listed or choose the menu option **Custom range** to select a range of years.

Dates

Choose a date from the **Added to Bookshelf** in the last: menu selections to limit your search results by the date a book or chapter was added to Bookshelf, or choose the **Custom range** menu option to enter a specific date or date range.

Resource Type

The resource type restricts your search based on the category of material the resource represents, such as: Clinical Guidelines, Documentation, Medical Genetics Resources, Methods Resources, Microbiology Resources, Monographs, Reference Works, Statistical Works, Systematic Reviews, Textbooks, Toxicology Resources.

Search Fields

Use the **Search fields** filter to search for terms in a specific search field (term (See Search Field Descriptions and Tags for common search fields).

Advanced Search

Searching by a Specific Field

Use the **Advanced Search Builder** to search for terms in a specific search field.

- To search by author, select Author from the All Fields menu, and then enter an author's name. The name will automatically display in the search box.
- To search for other fields in a book or resource's citation (e.g. Editor, Publisher, Title, Publication Year) or other specific bibliographic information, use the pull-down menus to select a field before entering a term in the search builder box.
- Terms entered in the builder are automatically added to the search box.
- Note that the default Boolean operator is AND; if desired, choose OR or NOT from the pull-down menu.
- You may also search a specific field by adding the appropriate tag to a search term (See Search Field Descriptions and Tags for common search fields.)
 - The search tag must be enclosed in square brackets.
 - Case and spacing do not matter.

Search Field Descriptions and Tags

Accession ID [AID]	Full Author Name [FA]	Publication Type[PTYP]
Attribute [ATTR]	Full Editor Name [FE]	Publication Year [PDAT]
Author [AU]	Full Text [FText]	Publisher [PUBN]
Book [BOOK]	Gene Name	RefPMID [RMID]
Book Accession ID [BACI]	Grant Number [GR]	Release Date [RD]
Chapter Accession ID [CHID]	ISBN [ISBN]	Resource Type [RT]
Concept Phrases and Keywords [KYWD]	MeSH Major Topic [MAJR]	Rid [RID]
Corporate Author [CA]	MeSH Subheadings [SH]	Title [TITL]
Disease	MeSH Terms [MH]	Type [TYPE]
Editor [ED]	PMID [PMID]	Stopwords
Filter [SB]	Protein Name	

Accession ID [AID]

Includes every NBK accession number from the Books database. These are identified as the “Bookshelf ID” at the bottom of each document's webpage in Bookshelf, e.g., NBK285222

All Fields [ALL]

Includes all searchable Bookshelf fields. Bookshelf ignores stopwords in search queries.

Attribute [ATTR]

Refers to specific search attributes, for example, “scoll hstatcollect”[Attribute] will retrieve all books in the HSTAT collection

Author [AU]

To search for an author, enter the last name followed by a space and up to the first two initials followed by a space and, if applicable, a suffix abbreviation (e.g., crowley wf jr[Author]). Do not include a period or comma after the last name. Initials and suffixes may be omitted when searching.

Book [BOOK]

The ID of the book that contains one or more documents. The book id field is pre-selected when searching within a book (e.g., dementia AND erta193[book]). Book ids may, but do not always, correspond to publisher series information, for instance, AHRQ Evidence Reports are prefaced by erta followed by the series number.

Book Accession ID [BACI]

Includes accession numbers from the Books database provided to each book in Bookshelf. Each accession number has a prefix, “NBK”. These are identified as the “Bookshelf ID” at the top of each book or resource’s Table of Contents page. This field will return all search results within the book with the specific Book Accession ID.

Chapter Accession ID [CHID]

Includes NBK accession numbers from the Books database provided to each chapter in Bookshelf. These are identified as the “Bookshelf ID” on top of each particular page of content, such as a Chapter page. This field will return all search results within the chapter with the specific Chapter Accession ID

Concept Phrases and Keywords [KYWD]

Keywords may be concept phrases (generated keywords or phrases) or they may be added by the author of a resource. Users can search by keyword or concept phrase by entering [KYWD] after the search term, e.g. metformin[KYWD].

Corporate Author [CA]

Corporate author identifies the corporate or collective authorship of an article. Bookshelf ignores stopwords in Corporate Author search queries.

Disease, Gene Name, and Protein Name

These facets are indexed fields specific to the GeneReviews resource. For more information, see [GeneReviews Advanced Search Help](#).

Editor [ED]

To search for an editor, enter the last name followed by a space and up to the first two initials followed by a space and, if applicable, a suffix abbreviation. Do not include a period or comma after the last name. Initials and suffixes may be omitted when searching.

Filter [SB]

Technical tags used by Bookshelf; filters include those to limit records for books (e.g., “book alz”[Filter]), series (e.g., “derpcollect”[Filter]) and subjects (e.g., “biochemistry”[Filter]). Book and series filters are preselected when you search within a book or within a series.

Full Author Name [FA]

The full author names from all books and chapters for which full names are provided to Bookshelf from the publisher. See Author [Author] for more information on author searching.

Full Editor Name [FE]

The full editor names from all books and chapters for which full names are provided to Bookshelf from the publisher. See Editor [Editor] for more information on editor searching.

Full Text [FText]

Includes all words and numbers in the full text; excludes text of bibliographies.

Grant Number [GR]

The grant number search field includes research grant numbers or contract numbers that designate financial support by US agencies or international funding sources. The four parts of the grant data are:

1. number, e.g., HHSN276201400262U
2. US Public Health Service (PHS) 2-character grant abbreviation, e.g., LM
3. institute acronym, e.g., NLM NIH HHS
4. country, e.g., United States

Each individual grant part can be searched using [gr], e.g., NIH[gr]

See [Grant codes and agency abbreviations](#) used in grant numbers for the 2-character abbreviations, PHS agency acronyms, and other US and non-US funding organization.

ISBN [ISBN]

To search by an ISBN number, enter a standardized international ISBN-10 or ISBN-13 code (e.g., 0-7167-3118-5 or 978-0-309-15706-3)

MeSH Major Topic [MAJR]

A MeSH major topic denotes the major topics of a publication, usually obtained from the title and/or abstract, statement of purpose, or other type of summary.

MeSH Subheadings [SH]

MeSH subheadings are often used as qualifiers for MeSH terms, and can also be used to search topically (e.g. etiology[SH] or veterinary[SH]). For a list of MeSH subheadings, please see [MeSH Qualifiers with Scope Notes](#).

MeSH Terms [MH]

The Medical Subject Heading (MeSH) terms are a controlled medical vocabulary of over 26,000 terms curated by the National Library of Medicine. MeSH terms are assigned by subject analysts who examine publications and ascribe several specific terms as part of the NLM Cataloging process (which includes Major Topics and Subheadings as well). For more information on MeSH, see the NLM's [online MeSH resource](#).

PMID [PMID]

To search by PubMed ID, enter the ID number (e.g., 21089236)

Publication Type [PTYP]

Describes the type of material the publication represents (e.g., “Practice Guideline”[PTYP]). See complete list of [Publication Types](#).

Publication Year [PDAT]

The year that the book or resource was published (e.g., 2010)

Publisher [PUBN]

To search for a publisher, enter the publisher’s name followed by the [publisher] tag. Bookshelf ignores stopwords in Publisher search queries.

RefPMID [RMID]

The PubMed ID of a reference cited in a Bookshelf publication.

Release Date [RD]

The date that the book or resource was added to or updated on the Bookshelf. Dates or date ranges must be searched using the format YYYY/MM/DD, e.g., “2010/12/10[ReleaseDate]”. The month and day are optional (e.g., “2010[ReleaseDate]” or “2010/12[ReleaseDate]”). To enter a date range, insert a colon: between each date (e.g., “2010/06/30:2010/12/30/[ReleaseDate]”).

Resource Type [RT]

The category of material the resource represents, such as: Clinical Guidelines, Documentation, Medical Genetics Resources, Methods Resources, Microbiology Resources, Monographs, Reference Works, Statistical Works, Systematic Reviews, Textbooks, Toxicology Resources.

Rid [RID]

The NCBI-internal identifier of any searchable part of a book in Bookshelf.

Title [TITL]

Words and numbers included in the title of a Bookshelf unit of content, i.e., book, chapter, section.

Type [TYPE]

The types and levels of content in Bookshelf that are indexed, including the entire book, parts, chapters, sections, appendices, glossaries, reference lists, boxed text, tables and figures.

Stopwords

Bookshelf searches use the same stopwords that are used in PubMed. See [PubMed Stopwords](#) for more information.

Browsing the Index of Terms

The **Search Builder Index** provides an alphabetical display of all terms in each Bookshelf search field. You can browse by all fields or within a specific field.

1. Click **Advanced** and use the **Builder** to select a search field from the All Fields menu.

2. Enter a term in the search box, and then click **Show Index list**.
3. The index displays an alphabetical list of search terms. The number of results for each term appears in parentheses. Click **Previous** or **Next** to move within the index.
4. Scroll until you find a term and then highlight it to add it to the search box. To select multiple terms (and OR them together), click on each term while holding down the Ctrl key (PC) or Command key (Mac).

Bookshelf processes all Boolean operators left to right. To change this order, enclose search terms to be processed in parentheses, e.g., hypertension AND (ACEIs OR ARBs). Bookshelf will automatically OR (and add parentheses) for multiple terms selected from the Index.

Previewing the Number of Search Results

Use the **Add to history** link in the Advanced Search Builder to preview the number of items available for a query before displaying the search results (see Advanced Search Tutorial video):

1. Click **Advanced**.
2. Use the Builder to add search terms to the search box.
3. Click **Add to history** to display the number of results in History.
4. To display the results, click the **Items found** link in History.

Combining Searches Using History

Previous searches can be combined or used in subsequent searches using the search number from the Advanced search **History** (see Advanced Search Tutorial video).

1. Click **Advanced**.
2. In **History**, click **Add** to move the search to the Builder.
3. Alternatively, enter a number sign followed by the search number (e.g., #1) in the search box, or click the search number to display additional options to add the search to the Builder, including Boolean operators OR or NOT. Other menu options include:
 - Delete from history
 - Show search results
 - Show search details
 - Save in **My NCBI**
4. Add additional search terms in the builder.
5. Click **Search**

The **Clear history** button will remove all of your queries. History can hold a maximum of 100 searches in one session, but the queries will be lost after eight hours of inactivity. Bookshelf uses cookies to keep a history of your searches. For you to use this feature, your Web browser must be set to accept cookies. A separate History will be kept for each NCBI database, although the search statement numbers will be assigned sequentially for all databases.

Displaying Your Search Results

When searching across Bookshelf, your results will automatically display as a list of books, **Sorted by Relevance** (see Figure 1) according to the number of results found. You can manually change the display of your search results by selecting from the various options within the **Display Settings** menu, including **Sort by Title** and **Pub Date**. Images containing your search term will display only in the **Images search in Bookshelf** panel (see Figure 2).

Search results from within books will be grouped automatically by the book unit having an Accession ID (example, chapter, section, appendix, etc) and **Sorted by Relevance**. The total number of results retrieved within each chapter or section will be displayed as a collapsible link below it (see Figure 3).

Your search terms will be bolded or highlighted in your results if this is selected in your my [My NCBI preferences](#). Your particular search terms will remain bolded or highlighted until you've conducted a new search query, you change your My NCBI preferences to not highlight search terms, or the next day.

Links to Related Data in Other NCBI Resources

Bookshelf automatically generates links from your search results to related results in other NCBI databases. These databases include **Gene**, **OMIM**, **PubChem Substance**, **PubMed Central (PMC)**, and **PubMed**. To access the links to other NCBI Databases:

Click the check box for one or more of the items retrieved in the list of search results.

Select from one of the five database links in the **Database** options pull-down menu in the **Find related data** panel to the right of the search results. You will be taken to the relevant results within the selected database.

Displaying the Search Details

The **Search Details** panel to the right of your search results shows the computer's translation of your query using search terms, field limits, and search rules. To access the full **Search Details** information, click on the "See more..." link below the panel. The full information is presented in four parts:

Query Translation displays the search string used by the computer to query the database. Use this box to edit the query.

Search will execute the search in the **Query Translation** box.

URL will display the current search as a URL to bookmark for future use.

Result provides the total number of results retrieved.

Database shows the NCBI database you are using (Books).

User Query shows the search strategy entered as you entered it in the search box and any syntax errors generated by the query.

If your results are not what you expected, it is a good idea to check the **Search Details** page for the computer's translation of your search to determine how to modify the query.

Note the Bookshelf search program may modify your search terms to enhance your retrieval. Untagged or unqualified terms that are entered in the Search box are matched (in this order) against a MeSH (Medical Subject Headings) translation table, a Digits translation table, the Full Author translation table, and an Author index.

The Bookshelf MeSH translation table contains:

- MeSH terms
- Concept phrases and keywords that are autogenerated or author-generated
- Terms derived from the Unified Medical Language System (UMLS) that have equivalent synonyms or lexical variants in English

The screenshot shows the NCBI Bookshelf search results for the term "diabetes". The search bar at the top contains "diabetes" and the search settings are set to "Summary, 20 per page, Sorted by Relevance". The results are displayed as a list of books, with the first result being "Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews [Internet]". Each result includes a cover image, the book title, author information, and a list of search results found within that book. Annotations A, B, C, and D highlight specific features: A points to the "Display Settings" menu, B points to the "Top results in this book" link, C points to the "Table of Contents" link, and D points to the "Top results in this book" link for the first result.

Figure 1. Search across all books in Bookshelf. The **Display Setting** options menu is set by default as **Sorted by Relevance** (A) according to the number of results found. Search results are grouped according to the book in which they appear. Each book includes a cover image, the book's citation information, a hyperlink from the book's title to a page to see all search results in the book (B), a link to the book's Table of Contents page (C), and a toggle link to view the top 3 results in the book (D).

The Digits translation table checks for publication dates, ISBNs, PMIDs for the books or documents, PMIDs for reference citations, and grant numbers.

The Full Author translation table contains full author names from all articles for which full names are provided to Bookshelf from the publisher. If the term is not found in the above tables, except for Full Author, and is not a single term, Bookshelf checks the author index for a match.

Creating Alerts

Users can create an alert to keep up to date on new search results for queries. This function requires a **MY NCBI** account. To use the **Create alert** function:

1. On the search results page, select **Create alert** from the menu beneath the search bar.
2. Select a name for your saved search (the tool automatically defaults to the search terms entered).
3. Confirm or change search terms.
4. Choose options to receive alerts, including:
 - o Email update options
 - o Email address
 - o Schedule frequency and day to receive alerts

NCBI Resources How To Sign in to NCBI

Bookshelf Books sleep apnea Search

Display Settings: Summary, 20 per page, Sorted

Results: 1 to 20 of 163

- GeneReviews™ [Internet]. Pagon RA, Adam MP, Bird TD, et al. Seattle (WA): University of Washington; 2001.
 - Top results in this book
 - Table of Contents
- Diagnosis and Treatment of Obstructive Sleep Apnea. Balk EM, M... Rockville (MD): Agency for Healthcare Research and Quality (US); 2012. No. 32.)
 - Top results in this book
 - Table of Contents
- Sleep Disorders and Sleep Deprivation: An Unmet Public Health Problem. Institute of Medicine (US) Committee on Sleep Disorders and Sleep Deprivation: National Academies Press; 2006.
 - Top results in this book
 - Table of Contents
- Future Research Needs for Treatment of Obstructive Sleep Apnea: Identification of Future Research Needs. Balk EM, Chung M, Chan JA, et al. Rockville (MD): Agency for Healthcare Research and Quality (US); 2012 Feb. (Future Research Needs Papers, No. 12.)
 - Top results in this book
 - Table of Contents

Figure 28.12
Sleep apnea. The sleep pattern of a patient with obstructive sleep apnea. In this condition, patients awake frequently and never descend into stages III or IV sleep. The brief descents below stage I in the record represent short periods of REM sleep. (After Carskadon and Dement, 1989, based on data from G. Nino-Murcia.)

Sleep Disorders.
Purves D, Augustine GJ, Fitzpatrick D, et al., editors. Neuroscience. 2nd edition. Sunderland (MA): Sinauer Associates; 2001.

See more (55).

Figure 2. Images search in Bookshelf. If there are four or more images containing your search term, an images panel will appear with the top four image results. Available figure captions and sources of figures in Bookshelf can be viewed by hovering over images in the panel (A) or by clicking on the thumbnail. To see a results page with all images containing your term click on the **See more** link (B).

- Report format
- Number of items
- Additional text

Saving and E-mailing Results and Searches

Using the Clipboard

The **Clipboard** provides a place to temporarily collect selected citations from your search queries. The Clipboard will be lost after 8 hours of inactivity in Bookshelf or on any of the other NCBI databases.

You may also save your search results indefinitely using [My NCBI](#).

To add citations to the Clipboard:

In your search results, use the check boxes to select search results. To save all of your results do not click any check boxes.

Use **Send to**, and select **Clipboard**.

To view your selections, click the **Clipboard panel items** link.

To delete citations from the Clipboard:

NCBI Resources How To

Bookshelf Books Browse Titles Create alert Advanced

Display Settings: Summary, 20 per page, Sorted by Relevance **A**

Results in this book: 1 to 20 of 69 << First < Prev Page 1

GeneReviews® [Internet]. Pagon RA, Adam MP, Ardinger HH, et al., editors. Seattle (WA): University of Washington, Seattle; 1993-2017. **B**

sleep apnea Search GeneReviews **C**

GeneReviews by Title GeneReviews Advanced Search Help

Achondroplasia. ← **Chapter Title** **D**

1. Pauli RM. 1998 Oct 12 [Updated 2012 Feb 16].
 ▾ Show details (5) **Chapter Author**
[Achondroplasia.](#)
[Management.](#)
[Clinical Characteristics.](#)
[References.](#)
[Summary.](#)

[Mucopolysaccharidosis Type IVA.](#)

2. Regier DS, Oetgen M, Tanpaiboon P. 2013 Jul 11 [Updated 2016 Mar 24].
 ▶ Show details (5)

[Mucopolysaccharidosis Type I.](#)

3. Clarke LA. 2002 Oct 31 [Updated 2016 Feb 11].
 ▶ Show details (4) **Date Chapter Created**

[Friedreich Ataxia.](#)

4. Bidichandani SI, Delatycki MB. 1998 Dec 18 [Updated 2017 Jun 1].
 ▶ Show details (4) **Date Chapter Updated**

[KCNK9 Imprinting Syndrome.](#) **Date Chapter Updated**

5. Zadeh N, Graham JM Jr. 2017 Mar 23.
 ▶ Show details (4)

Figure 3. Search within a book in Bookshelf. The **Display Settings** options menu is set by default as **Sorted by Relevance** (A). The citation of the book you are within is displayed at the top of the results page (B). To modify your search within the book displayed, enter a new term in the search box under the book's citation and press the **Search this book** button (C). Search results from a book are grouped by the book units having accession IDs (for example, a chapter, section or appendix) with the most relevant book unit ranked at the top (D). Each summary includes the chapter's hyperlinked title, and if available, the authors of the chapter, publication date when the chapter was created, and the date the chapter was updated. The number of results within a chapter containing your search term is displayed as a **Show details** link that opens to provide links to the particular resulting sections, tables and boxes.

Use the **Remove from clipboard** link to delete individual items, or use the check boxes to select items to delete, and then click the Remove selected items link.

To delete all citations from the Clipboard, do not select any items, click the **Remove all** link.

Saving as a Text File

1. In your search results, use the check boxes to select citations. You may move to other pages to continue your selections. If you do not make any selections, Bookshelf will save the entire retrieval.
2. From **Send to**, select **File**.
3. Your Web browser will prompt you to save the Bookshelf search results in a file on your computer.

E-mailing Results

1. In your search results, use the check boxes to select citations. To e-mail all citations displayed on the page, do not make any selections.
2. From **Send to**, select **E-mail**.
3. Choose selections for **Format**.
4. Enter an e-mail address. You may also enter additional text that will be included in the e-mail.
5. Click **E-mail**. The system returns you to your results page and displays a confirmation e-mail sent message.

You can read more about using the **Clipboard**, **Saving as a Text File** and **E-mailing Results** in [Saving and E-mailing Results and Searches in PubMed Help](#).

This panel does not display image results from queries using **Limits** or **Advanced Search**.

Frequently Asked Questions

Created: September 30, 2010; Updated: September 29, 2022.

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PubReader and PDF format

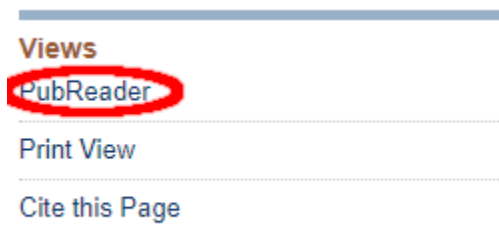
Why do some books have PDF files and others do not?

PDF files are made for several books created by NCBI. Some publishers also make available a PDF version of the full-text publication on Bookshelf. Books that have PDFs available for the entire publication have a “PDF version of this title” link on the right-hand side of the Table of Contents and all chapter pages. If PDFs are available for each chapter of a publication, there will be a “PDF version of this page” link on the right-hand side of each chapter page.

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How can I switch from the “classic” view back to the Pubreader view?

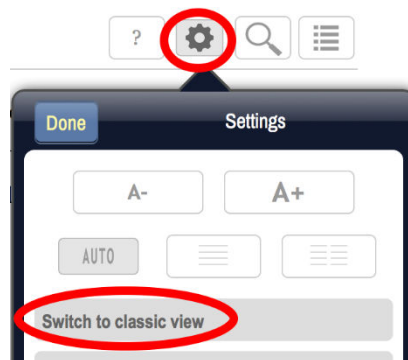
You can go to the Pubreader view from the “Views” sidebar menu.



The default setting is the classic view.

How can I switch from the PubReader view back to the “classic” view?

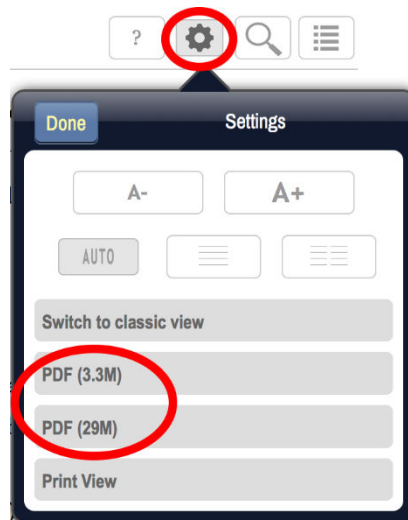
You can go back to classic view from the settings menu (gear icon).



The default setting is the classic view.

How can I access the PDF version in PubReader view?

Tap on the gear icon near the top right corner of the PubReader page, then tap the “PDF” option on the resulting menu. If there are two “PDF” options, tapping the larger-sized PDF option will download the “whole book” PDF, and tapping the smaller one will download the “chapter-only” PDF.



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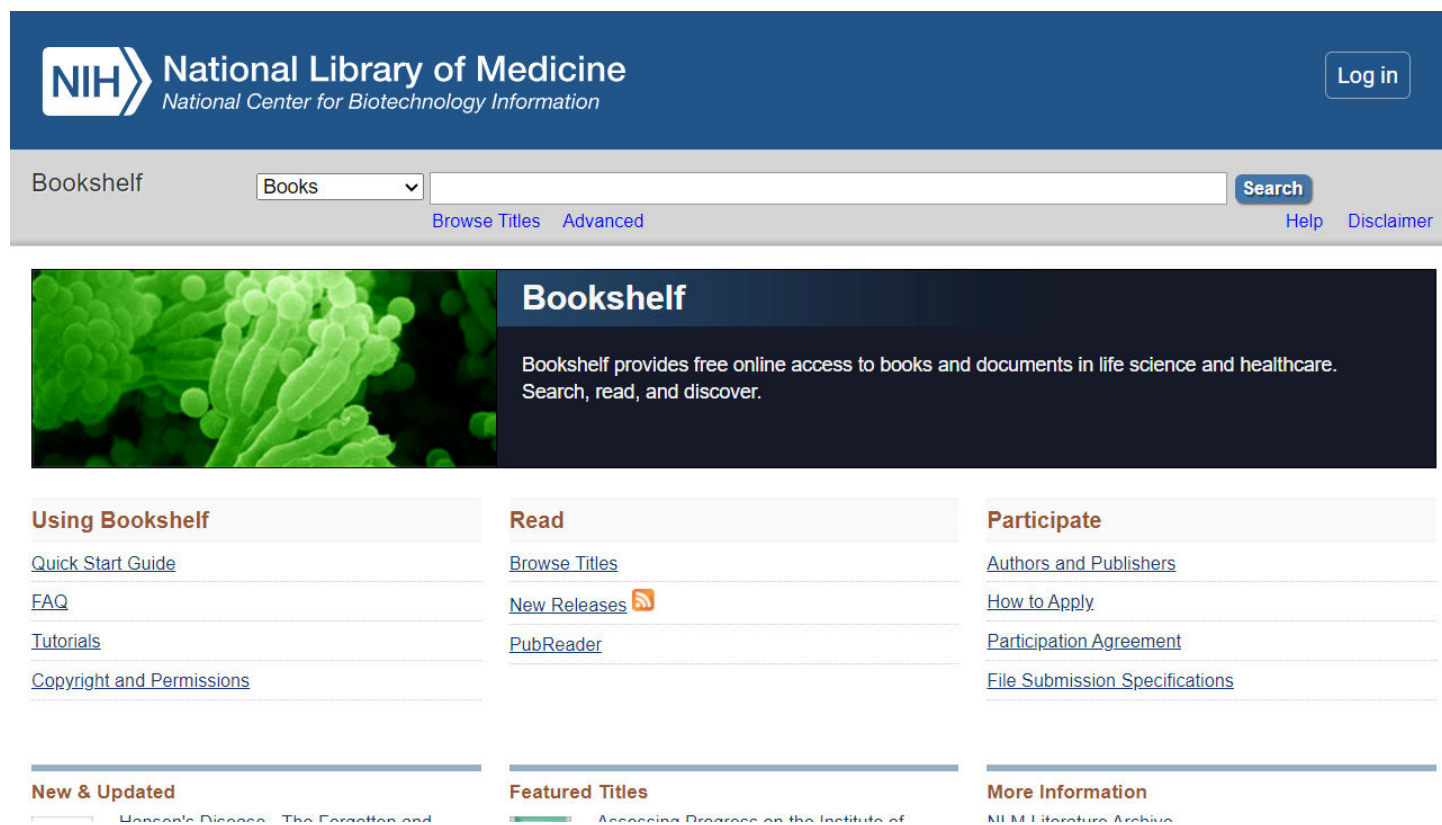
Tutorials

Updated: July 1, 2024.

This chapter contains a collection of short video tutorials that highlight the features of the Bookshelf.

Tutorial 1: Browsing

A student is just beginning his course in biology, and his teacher has recommended Bookshelf as a good source of information. The student explores which books are relevant to his studies.



The screenshot shows the NIH National Library of Medicine Bookshelf website. At the top, there is a dark blue header with 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 a dropdown menu set to "Books", a search button, and links for "Browse Titles" and "Advanced". There are also links for "Help" and "Disclaimer". The main content area features a large image of green microorganisms on the left and a dark blue box on the right with the text "Bookshelf provides free online access to books and documents in life science and healthcare. Search, read, and discover." Below this are three columns of links: "Using Bookshelf" (Quick Start Guide, FAQ, Tutorials, Copyright and Permissions), "Read" (Browse Titles, New Releases with a RSS icon, PubReader), and "Participate" (Authors and Publishers, How to Apply, Participation Agreement, File Submission Specifications). At the bottom, there are three sections: "New & Updated" (Hansen's Disease: The Forgotten and...), "Featured Titles" (Assessing Progress on the Institute of...), and "More Information" (NLM Literature Archive).

Tutorial 1. Browsing


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Tutorial 2: Search

A medical student is trying to understand the role of the t-cell receptor during a viral infection.



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Tutorial 2. Search


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Tutorial 3: Inside a book

A genetics counselor is seeking information on hemochromatosis. He visits GeneReviews to learn about how the disease is inherited, and the risk to family members.


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Tutorial 4: Using facets


A user needs to narrow results while seeking information otitis media.


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Tutorial 4. Using facets


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Tutorial 5: Advanced search

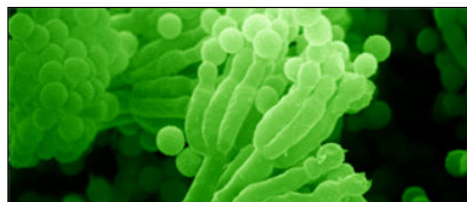
A doctor is researching breast cancer. She wants to know about the BRCA gene and the drug tamoxifen.

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Bookshelf Queries and Discovery Guides

Created: July 1, 2024.

This living document contains a collection of discovery guides and queries to help you find various types of biomedical, life sciences, and healthcare literature available in the NCBI Bookshelf.

Discovery by Subject

- Subject Queries
- Toxicology Discovery Guide

Subject Queries

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Subject (Hyperlinked to a scope description)	Bookshelf Query (Hyperlinked to results in Bookshelf)
Addiction Medicine	("behavior, addictive"[mesh] OR collection_hssamhsatipcollect[filter] OR "opioid-related disorders"[mesh] OR "heroin dependence"[mesh] OR "narcotic-related disorders"[mesh] OR "amphetamine-related disorders"[mesh] OR "cocaine-related disorders"[mesh] OR "alcoholism"[mesh] OR "tobacco use disorder"[mesh] OR "drug users"[mesh] OR "neonatal abstinence syndrome"[mesh]) OR (("opioid"[title] OR "alcoholism"[title] OR "smoking"[title] OR "substance abuse"[title] OR "addiction"[title]) AND book[type])
Aerospace Medicine	"aerospace medicine"[mesh] OR "altitude"[mesh] OR "space flight"[mesh] OR ("NASA"[title] AND book[type]) OR ("aviation"[title] AND book[type]) OR ("altitude"[title] AND book[type])
Allergy and Immunology	"allergy and immunology"[mesh] OR "hypersensitivity"[mesh] OR ("allergy"[title] AND book[type]) OR ("hypersensitivity"[title] AND book[type]) OR ("immunology"[title] AND book[type]) OR ("immune"[title] AND book[type]) OR ("asthma"[title] AND book[type])
Anatomy	anatomy[mesh] OR anatomy[kywd] NOT cd[book]
Anesthesiology	("pain management"[mesh] OR "palliative care"[mesh]) OR ("pain"[title] AND book[type]) OR ("palliative"[title] AND book[type])
Anthropology	"anthropology"[mesh] OR "anthropology, physical"[mesh] OR "anthropology, medical"[mesh] OR "anthropology, cultural"[mesh]
Behavioral Medicine	"behavioral medicine"[mesh] OR "health behavior"[mesh] OR "health risk behaviors"[mesh] OR "patient acceptance of health care"[mesh] OR ("behavior"[title] AND book[type] OR "behavioral"[title] AND book[type])
Biochemistry	"biochemistry"[mesh]
Bioengineering	"bioengineering"[mesh] OR ("translational science"[title] AND "book"[type])

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Bioinformatics	"computational biology"[mesh] OR ("bioinformatics"[title] AND book[type]) OR ("computational"[title] AND book[type]) OR ("data science"[title] AND book[type])
Biomedical Imaging	"diagnostic imaging"[mesh] OR "ultrasonography"[mesh] OR ("imaging"[title] AND book[type]) OR ("diagnostic imaging"[kywd] AND book[type])
Biomedical Research	"biomedical research"[mesh]
Biophysics	"biophysics"[mesh] OR "biophysical phenomena"[mesh]
Biotechnology	"biotechnology"[mesh] OR "genetic engineering"[mesh] OR "recombinant proteins"[mesh] OR ("biotechnology"[title] AND book[type]) OR ("genetic engineering"[title] AND book[type]) OR ("gene editing"[title] AND book[type])
Cardiology	"cardiovascular physiological phenomena"[mesh] OR "diagnostic techniques, cardiovascular"[mesh] OR "cardiovascular surgical procedures"[mesh] OR "cardiovascular abnormalities"[mesh] OR "pregnancy complications, cardiovascular"[mesh] OR "cardiovascular agents"[mesh] OR "heart disease risk factors"[mesh] OR "cardiovascular system"[mesh] OR "myocardial infarction"[mesh] OR "cardiovascular diseases"[mesh] OR ("cardiovascular"[title] AND book[type]) OR ("heart"[title] AND book[type]) OR ("stroke"[title] AND book[type])
Cell Biology	"cell biology"[mesh] OR ("cell biology"[kywd] AND book[type])
Chemistry	"chemistry"[mesh] OR ("chemistry"[kywd] AND book[type])
Clinical Laboratory Science	"clinical laboratory techniques"[mesh] OR ("testing"[title] AND book[type]) NOT (RTI[publisher] OR PCORI[publisher] OR (sb[all] AND collection_methodscollect[filter]))
Cognitive Science	"cognitive science"[mesh]
Communication Disorders	"communication disorders"[mesh] OR ("learning disabilities"[title] AND book[type]) OR ("speech"[title] AND book[type])
Complementary and Alternative Medicine	"complementary therapies"[mesh] OR ("yoga"[title] AND book[type]) OR ("acupuncture"[title] AND book[type]) OR ("mindfulness"[title] AND book[type]) OR ("massage"[title] AND book[type]) OR ("art therapy"[title] AND book[type]) OR ("complementary therapies"[kywd] AND book[type]) OR ("alternative therapies"[kywd] AND book[type]) OR ("tai chi"[title] AND book[type]) OR ("spinal manipulation"[title] AND book[type]) OR "music therapy"[title] AND book[type] OR ("dance"[title] AND book[type])
Dentistry	"dentistry"[mesh] OR ("dentistry"[kywd] AND book[type]) OR ("oral health"[title] AND book[type])
Dermatology	"dermatologic agents"[mesh] OR "skin diseases"[mesh] OR ("skin cancer"[title] AND book[type]) OR ("acne"[title] AND book[type]) OR ("psoriasis"[title] AND book[type]) OR ("melanoma"[title] AND book[type]) OR ("skin ulcer"[title] AND book[type]) OR ("eczema"[title] AND book[type]) OR ("dermatitis"[title] AND book[type]) OR "skin disease"[kywd] AND book[type] https://www.ncbi.nlm.nih.gov/books/?term="skin+diseases" [mesh]
Disaster Management	"disasters"[mesh] OR "natural disasters"[mesh] OR "disaster planning"[mesh] OR "Fukushima nuclear accident"[mesh] OR "disaster medicine"[mesh] OR ("disaster"[title] AND book[type]) OR ("public health emergency"[title] AND book[type]) OR ("terrorism"[title] AND book[type])
Education for the Health Professions	"education, professional"[mesh]
Embryology	"embryology"[mesh] OR ("developmental biology"[title] AND book[type]) OR ("embryo"[title] AND book[type])

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Emergency Medicine	"emergency service, hospital"[mesh] OR "emergency treatment"[mesh] OR "emergency medical services"[mesh] OR "emergency services, psychiatric"[mesh] OR "emergency medicine"[mesh] OR "emergency medical technicians"[mesh] OR ("emergency department"[title] AND book[type]) OR ("first responders"[title] AND book[type]) OR ("emergency services"[title] AND book[type])
Endocrinology	"endocrine system diseases"[mesh] OR "diagnostic techniques, endocrine"[mesh] OR "endocrine glands"[mesh] OR "hormones"[mesh] OR ("endocrine"[kywd] AND book[type]) OR ("diabetes"[title] AND book[type]) OR ("diabetic"[title] AND book[type]) OR ("thyroid"[title] AND book[type]) OR endotext[book]
Environmental Health	"environmental health"[mesh] OR ("environmental"[title] AND book[type]) OR ("climate"[title] AND book[type]) OR "National Institute of Environmental Health Sciences"[publisher] OR "National Toxicology Program"[publisher] OR "Environmental Protection Agency"[publisher]
Exercise Science	"exercise"[mesh] OR ("exercise"[title] AND book[type]) OR ("physical activity"[title] AND book[type]) OR ("fitness"[title] AND book[type]) OR ("sport"[title] AND book[type]) OR ("athletic"[title] AND book[type])
Family Practice	"family practice"[mesh] OR "comprehensive health care"[mesh] OR ("primary care"[title] AND book[type])
Forensic Medicine	"forensic medicine"[mesh] OR ("forensic"[title] AND book[type]) OR ("forensic"[kywd] AND book[type]) OR ("expert witness"[title] AND book[type])
Gastroenterology	"gastrointestinal diseases"[mesh] OR ("gastrointestinal"[title] AND book[type]) OR ("colorectal"[title] AND book[type]) OR ("digestive"[title] AND book[type]) OR ("stomach"[title] AND book[type]) OR ("esophageal"[title] AND book[type]) OR ("Crohn's disease"[title] AND book[type]) OR ("colitis"[title] AND book[type]) OR ("bowel"[title] AND book[type]) OR ("fecal incontinence"[title] AND book[type]) OR ("rectal"[title] AND book[type]) OR ("anal"[title] AND book[type]) OR "gastrointestinal"[kywd]
Genetics	"genetics"[mesh]
Geriatrics	"geriatrics"[mesh] OR "aged"[mesh] OR ("older adults"[title] AND book[type]) OR ("older patients"[title] AND book[type]) OR ("elderly"[title] AND book[type]) OR ("seniors"[title] AND book[type]) OR (aging[title] AND book[type]) OR ("home health"[title] AND book[type]) OR ("assisted living"[title] AND book[type]) OR ("nursing home"[title] AND book[type]) OR ("long term care"[title] AND book[type]) OR ("cognitive decline"[title] AND book[type]) OR ("cognitive impairment"[title] AND book[type]) OR ("Alzheimer's"[title] AND book[type]) OR ("dementia"[title] AND book[type]) OR ("falls"[kywd] AND book[type]) OR ("frail"[title] AND book[type]) OR ("geriatric"[kywd] AND book[type])
Gynecology	"gynecology"[mesh] OR "reproductive medicine"[mesh] OR "genital diseases, female"[mesh] OR "gynecologic surgical procedures"[mesh] OR ("menstrual"[title] AND book[type]) OR ("cervical cancer"[title] AND book[type]) OR ("menopause"[title] AND book[type]) OR ("reproductive health"[title] AND book[type]) OR ("uterine"[title] AND book[type]) OR ("endometrial"[title] AND book[type]) OR ("preterm delivery"[title] AND book[type]) OR ("pelvic pain"[title] AND book[type]) OR ("BRCA"[title] AND book[type]) OR ("ovarian"[title] AND book[type]) OR ("endometriosis"[title] AND book[type]) OR ("gynecological"[title] AND book[type]) OR ("infertility"[title] AND book[type]) OR ("tubal sterilization"[title] AND book[type]) OR ("female genital"[title] AND book[type])
Health Communication	"health communication"[mesh] OR ("health literacy"[title] AND book[type]) OR ("health communication"[title] AND book[type]) OR ("misinformation"[title] AND book[type]) OR ("telemedicine"[title] AND book[type])
Health Economics	"health care economics and organizations"[mesh] OR ("economic"[title] AND book[type])
Health Facilities	"health facilities"[mesh] OR ("hospital"[title] AND book[type]) OR ("clinic"[title] AND book[type]) OR ("long term care"[title] AND book[type]) OR ("blood bank"[title] AND book[type]) OR ("laboratories"[title] AND book[type]) OR ("laboratory"[title] AND book[type])

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National Library of Medicine Collected Subject Areas with Holdings in Bookshelf	
Subject (Hyperlinked to a scope description)	Bookshelf Query (Hyperlinked to results in Bookshelf)
Health Occupations	"health occupations"[mesh] OR "allied health occupations"[mesh]
Health Policy	"health policy"[mesh] OR ("policy"[title] AND book[type]) OR "social determinants of health"[mesh]
Health Sciences Librarianship	"library science"[mesh] OR ("open access"[title] AND book[type]) OR ("public access"[title] AND book[type]) OR ("open science"[title] AND book[type]) OR ("data science"[title] AND book[type]) OR ("national library of medicine"[publisher] NOT hstatcollect[All Fields]) OR (all[sb] AND collection_helpcollect[filter])
Health Services Research	"health services research"[mesh]
Hematology	"hematologic diseases"[mesh] OR "hematologic agents"[mesh] OR "hematologic neoplasms"[mesh] OR "hematologic tests"[mesh] OR "pregnancy complications, hematologic"[mesh] OR ("sickle cell"[title] AND book[type]) OR ("anemia"[title] AND book[type]) OR ("hematologic"[title] AND book[type]) OR ("blood"[kywd] AND book[type])
Histology	"histology"[mesh] OR "histological techniques"[mesh] OR "shadowing technique, histology"[mesh] OR "histology, comparative"[mesh] OR "neoplasms by histological type"[mesh] OR "staining and labeling"[mesh]
History of Medicine	"history of medicine"[mesh] OR "history, medieval"[mesh] OR "history, ancient"[mesh] OR "history, modern 1601"[mesh] OR "history, early modern 1451-1600"[mesh]
Human Nutrition	"nutrition assessment"[mesh] OR "nutritional physiological phenomena"[mesh] OR "nutritive value"[mesh] OR "nutritional sciences"[mesh] OR "child nutrition sciences"[mesh] OR "prenatal nutritional physiological phenomena"[mesh] OR "nutrition disorders"[mesh] OR "nutritional status"[mesh] OR "sports nutritional physiological phenomena"[mesh] OR "child nutritional physiological phenomena"[mesh] OR "elder nutritional physiological phenomena"[mesh] OR "nutrition therapy"[mesh] OR "nutritive sweeteners"[mesh] OR "maternal nutritional physiological phenomena"[mesh] OR "nutrition surveys"[mesh] OR "nutritional requirements"[mesh] OR "nutrigenomics"[mesh] OR "infant nutritional physiological phenomena"[mesh] OR "parenteral nutrition"[mesh] OR "nutrition policy"[mesh] OR "parenteral nutrition, total"[mesh] OR "diet, food, and nutrition"[mesh] OR "nutritional and metabolic diseases"[mesh] OR "nutritional support"[mesh] OR "enteral nutrition"[mesh] OR "malnutrition"[mesh] OR "child nutrition disorders"[mesh] OR "parenteral nutrition solutions"[mesh] OR "infant nutrition disorders"[mesh] OR "diet, plant-based"[mesh] OR "food labeling"[mesh] OR "diet, healthy"[mesh] OR "eating"[mesh] OR "food assistance"[mesh] OR "USDA"[publisher] OR ("nutrition"[title] AND book[type])
Infectious Diseases	"skin diseases, infectious"[mesh] OR "communicable diseases"[mesh] OR "communicable diseases, emerging"[mesh] OR "bone diseases, infectious"[mesh] OR "disease vectors"[mesh] OR "zoonoses"[mesh] OR "infectious disease transmission, vertical"[mesh] OR "infectious disease transmission, patient-to-professional"[mesh] OR "contact tracing"[mesh] OR "fatigue syndrome, chronic"[mesh] OR "infectious disease transmission, professional-to-patient"[mesh] OR ("infectious"[title] AND book[type]) OR ("HIV"[title] AND book[type]) OR ("COVID"[title] AND book[type]) OR ("coronavirus"[title] AND book[type]) OR ("hepatitis"[title] AND book[type]) OR ("zika"[title] AND book[type]) OR ("malaria"[title] AND book[type]) OR ("influenza"[title] AND book[type]) OR ("sexually transmitted"[title] AND book[type])
Internal Medicine	"internal medicine"[mesh]
Laboratory Animal Science	"laboratory animal science"[mesh]
Medical Botany	"botany"[mesh]
Medical Genetics	"medical genetics resources"[Resource Type] OR "genetics, medical"[mesh]

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National Library of Medicine Collected Subject Areas with Holdings in Bookshelf	
Subject (Hyperlinked to a scope description)	Bookshelf Query (Hyperlinked to results in Bookshelf)
Medical Humanities	"humanities"[mesh]
Medical Informatics	"informatics"[mesh] OR ("informatics"[title] AND book[type]) OR ("data science"[title] AND book[type])
Medical Sociology	"sociology, medical"[mesh] OR "sociological factors"[mesh] OR "sociology"[mesh]
Medicine	"medicine"[mesh]
Microbiology	"microbiology"[mesh] OR "microbiological techniques"[mesh] OR "microbiological phenomena"[mesh] OR "air microbiology"[mesh] OR "environmental microbiology"[mesh] OR "food microbiology"[mesh] OR "industrial microbiology"[mesh] OR "water microbiology"[mesh] OR ("microbiology"[title] AND book[type]) OR ("microbial"[title] AND book[type]) OR ("bacterial"[title] AND book[type]) OR ("antibiotic"[title] AND book[type]) OR "microbiology resources"[Resource Type]
Military Medicine	"military medicine"[mesh] OR vaespcollect[book]
Molecular Biology	"molecular biology"[mesh] OR ("molecular biology"[title] AND book[type])
Nephrology	("kidney diseases"[mesh] OR "kidney"[mesh] OR "kidney neoplasms"[mesh] OR "polycystic kidney diseases"[mesh] OR "kidney transplantation"[mesh] OR "kidney diseases, cystic"[mesh] OR "renal insufficiency"[mesh] OR "kidney function tests"[mesh] OR "acute kidney injury"[mesh] OR "renal replacement therapy"[mesh] OR "renal insufficiency, chronic"[mesh] OR "kidney failure, chronic"[mesh] OR "diabetic nephropathies"[mesh]) OR ("kidney diseases"[kywd] OR "kidney"[kywd] OR "kidney neoplasms"[kywd] OR "polycystic kidney diseases"[kywd] OR "kidney transplantation"[kywd] OR "renal insufficiency"[kywd] OR "kidney function tests"[kywd] OR "acute kidney injury"[kywd] OR "renal replacement therapy"[kywd] OR "renal insufficiency, chronic"[kywd] OR "kidney failure, chronic"[kywd] OR "diabetic nephropathies"[kywd] AND "NICE"[publisher]) OR ("kidney"[title] AND book[type])
Neuroscience	"neurosciences"[mesh] OR ("neuroscience"[title] AND book[type]) OR ("brain"[title] AND book[type])
Nursing	("nursing"[title] AND "book"[type]) OR nursing[mesh] OR "openrncollect"[book] OR ("nurse"[title] AND book[type])
Obstetrics	"obstetrics"[mesh] OR "obstetric surgical procedures"[mesh] OR "pregnancy complications"[mesh] OR ("pregnancy"[title] AND book[type]) OR "caesarean"[title] AND book[type] OR ("postpartum"[title] AND book[type]) OR ("obstetric"[title] AND book[type]) OR ("preeclampsia"[title] AND book[type]) OR ("birth"[title] AND book[type]) OR ("labor"[title] NOT "labor market"[title]) AND book[type] OR ("labour"[title] AND book[type]) OR ((pregnant[title] NOT non-pregnant[title]) AND book[type])
Occupational Health and Safety	"occupational health"[mesh] OR "occupational health services"[mesh] OR "occupational medicine"[mesh] OR (("work"[title] NOT "social work"[title]) AND book[type])
Oncology	"medical oncology"[mesh] OR "neoplasms"[mesh] OR ("cancer"[title] AND book[type])
Ophthalmology	"eye diseases"[mesh] OR ("ocular"[title] AND book[type]) OR ("vision conditions"[title] AND book[type]) OR ("vision loss"[title] AND book[type]) OR ("vision correction"[title] AND book[type]) OR ("vision disorders"[title] AND book[type]) OR ("vision screening"[title] AND book[type]) OR ("retinal"[title] AND book[type]) OR "macular degeneration"[title] AND book[type] OR ("glaucoma"[title] AND book[type]) OR ("eye"[title] AND book[type])
Orthopedics	"orthopedics"[mesh] OR "orthopedic procedures"[mesh] OR ("fractures"[title] AND book[type]) OR ("fracture"[title] AND book[type]) OR ("joint replacement"[title] AND book[type]) OR ("hip"[title] AND book[type]) OR "knee"[title] AND book[type] OR ("shoulder"[title] AND book[type]) OR ("orthopedic"[title] AND book[type]) OR ("neck pain"[title] AND book[type]) OR ("back pain"[title] AND book[type]) OR ("spinal"[title] AND book[type]) OR ("scoliosis"[title] AND book[type])

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National Library of Medicine Collected Subject Areas with Holdings in Bookshelf	
Subject (Hyperlinked to a scope description)	Bookshelf Query (Hyperlinked to results in Bookshelf)
Otolaryngology	"otologic surgical procedures"[mesh] OR "otorhinolaryngologic diseases"[mesh] OR "otorhinolaryngologic surgical procedures"[mesh] OR ("hearing loss"[title] AND book[type]) OR ("hearing screening"[title] AND book[type]) OR ("cochlear"[title] AND book[type]) OR ("rhinosinusitis"[title] AND book[type]) OR ("throat"[title] AND book[type]) OR ("sleep apnea"[title] AND book[type]) OR ("sinus"[title] AND book[type]) OR ("sinuses"[title] AND book[type]) OR ("otitis media"[title] AND book[type]) OR ("tinnitus"[title] AND book[type])
Parasitology	"parasitic diseases"[mesh] OR "parasites"[mesh] OR ("parasites"[title] AND book[type]) OR ("malaria"[title] AND book[type])
Pathology	"pathology"[title] AND book[type]
Pediatrics	"pediatrics"[mesh] OR ("pediatric"[title] AND book[type]) OR ("paediatric"[title] AND book[type]) OR ("children"[title] AND book[type]) OR ("child"[title] AND book[type]) OR ("young people"[title] AND book[type]) OR ("youth"[title] AND book[type]) OR ("adolescent"[title] AND book[type])
Pharmacology	"pharmacology"[mesh] OR "pharmacological and toxicological phenomena"[mesh] OR "technology, pharmaceutical"[mesh] OR ("drug"[title] AND book[type]) OR "drugs"[title] AND book[type] OR ("opioid"[title] AND book[type]) OR ("assay"[title] AND book[type]) OR ("assays"[title] AND book[type]) OR ("pharmaceutical"[title] AND "book"[type]) OR ("antimicrobials"[title] AND book[type]) OR cadthcdrcollect[book] OR livertox[book] OR lactmed[book]
Physical Medicine and Rehabilitation	"physical and rehabilitation medicine"[mesh] OR "physical therapy modalities"[mesh] OR "rehabilitation"[mesh] OR "biomechanical phenomena"[mesh] OR ("rehabilitation"[title] AND book[type]) OR ("physical therapy"[title] AND book[type])
Physiology	"physiology"[mesh] OR "physiological phenomena"[mesh]
Plant Biology	"plants"[mesh] OR "herbicides"[mesh] OR "pharmacognosy"[mesh] OR "phytotherapy"[mesh] OR "plant proteins"[mesh] OR ("herbal"[title] AND book[type])
Podiatry	"foot diseases"[mesh] OR ("foot"[title] AND book[type])
Preventive Medicine	"health promotion"[mesh] OR ("preventative"[title] AND book[type]) OR ("prevention"[title] AND book[type])
Primatology	"primates"[mesh] OR ("primate"[title] AND book[type])
Psychiatry	"psychiatry"[mesh] OR "mental disorders"[mesh] OR "mentally ill persons"[mesh] OR ("mental illness"[title] AND book[type]) OR ("mental health"[title] AND book[type]) OR ("substance use"[title] AND book[type]) OR ("alcohol"[title] AND book[type]) OR ("drug use"[title] AND book[type]) OR ("opioid"[title] AND book[type]) OR ("smoking"[title] AND book[type]) OR ("tobacco"[title] AND book[type]) OR ("bipolar disorder"[title] AND book[type]) OR ("posttraumatic stress disorder"[title] AND book[type]) OR ("post-traumatic stress disorder"[title] AND book[type]) OR ("depression"[title] AND book[type]) OR ("depressive disorder"[title] AND book[type]) OR ("anxiety"[title] AND book[type]) OR ("panic"[title] AND book[type]) OR ("psychosis"[title] AND book[type]) OR ("schizophrenia"[title] AND book[type]) OR ("borderline personality"[title] AND book[type]) OR ("dementia"[title] AND book[type]) AND book[type] OR ("eating disorders"[title] AND book[type]) OR ("attention deficit hyperactivity disorder"[title] AND book[type]) OR ("ADHD"[title] AND book[type]) OR ("autism"[title] AND book[type])

Table continued from previous page.

Subject (Hyperlinked to a scope description)	Bookshelf Query (Hyperlinked to results in Bookshelf)
Psychology	"psychology"[mesh] OR ("psychological"[title] AND book[type]) OR ("behavioral"[title] AND book[type]) OR ("cognitive"[title] AND book[type])
Public Health	"public health"[mesh] OR "social medicine"[mesh] OR "national health programs"[mesh] OR ("disasters"[title] AND book[type]) OR ("epidemiology"[title] AND book[type]) OR ("screening"[title] AND book[type]) OR ("preventative"[title] AND book[type]) OR ("population health"[title] AND book[type]) OR ("health disparities"[title] AND book[type]) OR ("demographic"[title] AND book[type]) OR "world health organization"[publisher] OR "world bank"[publisher] OR intra_hhs_collaborations[filter] OR trans_nih_collaborations[filter]
Pulmonary Medicine	"lung diseases"[mesh] OR "respiratory system"[mesh] OR ("lung cancer"[title] AND book[type]) OR ("COVID"[title] AND book[type]) OR ("asthma"[title] AND book[type]) OR ("tuberculosis"[title] AND book[type]) OR ("COPD"[title] AND book[type]) OR ("chronic obstructive pulmonary disease"[title] AND book[type]) OR ("pneumonia"[title] AND book[type])
Radiology	"radiology"[mesh] OR "nuclear medicine"[mesh] OR ("nuclear medicine"[title] AND book[type]) OR ("imaging"[title] AND book[type]) OR "micad"[book] OR ("radiological"[title] AND book[type]) OR ("radiology"[title] AND book[type]) OR ("x-ray"[title] AND book[type]) OR ("MRI"[title] AND book[type]) OR ("CT"[title] AND book[type]) OR ("ultrasound"[title] AND book[type])
Religion and Medicine	"religion"[mesh] OR ("mindfulness"[title] AND book[type]) OR ("spiritual"[title] AND book[type]) OR ("religious"[title] AND book[type]) OR ("religion"[title] AND book[type]) OR ("yoga"[title] AND book[type]) OR ("Christianity"[title] AND book[type]) OR ("Christian"[title] AND book[type]) OR ("Catholic"[title] AND book[type]) OR ("Protestant"[title] AND book[type]) OR ("Buddhism"[title] AND book[type]) OR ("Buddhist"[title] AND book[type]) OR ("Muslim"[title] AND book[type]) OR ("Islamic"[title] AND book[type]) OR ("Jewish"[title] AND book[type])
Reproductive Medicine	"reproductive medicine"[mesh] OR "reproductive health"[mesh] OR "reproductive techniques"[mesh] OR ("reproductive"[title] AND book[type]) AND ("fertility"[title] AND book[type]) OR ("infertility"[title] AND book[type]) OR ("contraception"[title] AND book[type]) OR ("contraceptive"[title] AND book[type]) OR ("sexuality"[title] AND book[type]) OR ("oocytes"[title] AND book[type]) OR ("regenerative medicine"[title] AND book[type]) OR ("stem cell"[title] AND book[type]) OR ("IVF"[title] AND book[type]) OR ("in vitro fertilization"[title] AND book[type])
Rheumatology	"rheumatology"[mesh] OR "rheumatic diseases"[mesh] OR ("rheumatoid arthritis"[title] AND book[type]) OR ("rheumatic"[title] AND book[type]) OR ("osteoarthritis"[title] AND book[type]) OR ("gout"[title] AND book[type]) OR ("arthritis"[title] AND book[type])
Space Life Sciences	"exobiology"[mesh] OR "extraterrestrial environment"[mesh] OR ("NASA"[title] AND book[type]) OR ("planetary"[title] AND book[type])
Sports Medicine	"sports medicine"[mesh] OR "sports"[mesh] OR "athletic injuries"[mesh] OR "doping in sports"[mesh] OR "exercise"[mesh] OR "exercise movement techniques"[mesh] OR "exercise therapy"[mesh] OR ("sports"[title] AND book[type]) OR ("sport"[title] AND book[type]) OR ("fitness"[title] AND book[type]) OR ("physical activity"[title] AND book[type]) OR ("exercise"[title] AND book[type]) OR ("athletic"[title] AND book[type]) OR ("athlete"[title] AND book[type]) OR ("athletes"[title] AND book[type])
Surgery	"general surgery"[title] OR ("surgical"[title] AND book[type]) OR ("surgery"[title] AND book[type]) OR ("operative"[title] AND book[type]) OR ("operation"[title] AND book[type])
Therapeutics	"therapeutics"[mesh] OR ("therapy"[title] AND book[type]) OR ("therapies"[title] AND book[type]) OR ("treatment"[title] AND book[type]) OR ("treatments"[title] AND book[type]) OR ("intervention"[title] AND book[type]) OR ("interventions"[title] AND book[type])

Table continued from previous page.

National Library of Medicine Collected Subject Areas with Holdings in Bookshelf	
Subject (Hyperlinked to a scope description)	Bookshelf Query (Hyperlinked to results in Bookshelf)
Toxicology	"toxicology"[mesh] OR "pharmacogenetics"[mesh] OR "poisons"[mesh] OR "Agency for Toxic Substances and Disease Registry"[publisher] OR (all[sb] AND collection_iarcomonocollect[filter]) OR ("National Academies Press"[publisher] AND toxicology[title] AND book[type]) OR "lactmed"[book] OR "livertox"[book] OR (all[sb] AND collection_consexpocollect[filter]) OR "National Toxicology Program"[publisher] OR "National Institute of Environmental Health Sciences"[publisher] OR "Environmental Protection Agency"[publisher] OR (all[sb] AND collection_nichdbpcacollect[filter])
Urology	"urinary incontinence"[mesh] OR "urogenital neoplasms"[mesh] OR "urologic diseases"[mesh] OR "urologic surgical procedures"[mesh] OR ("bladder"[title] AND book[type]) OR ("urinary incontinence"[title] AND book[type]) OR ("urinary"[title] AND book[type]) OR ("kidney"[title] AND book[type]) OR ("prostate"[title] AND book[type]) OR ("anal"[title] AND book[type]) OR ("cervical"[title] AND book[type]) OR ("nephropathy"[title] AND book[type])
Veterinary Medicine	"veterinary medicine"[mesh] OR "animal diseases"[mesh] OR "animal technicians"[mesh] OR "laboratory animal science"[mesh] OR ("zoonotic"[title] AND book[type]) OR ("rodents"[title] AND book[type]) OR ("rats"[title] AND book[type]) OR ("mice"[title] AND book[type]) OR ("primate"[title] AND book[type]) OR ("primates"[title] AND book[type]) OR ("animal"[title] AND book[type]) OR ("animals"[title] AND book[type]) OR ("veterinary"[title] AND book[type])

Toxicology Discovery Guide

Bookshelf contains a substantial collection of toxicology literature. The following sections provide more detail about this collection and how to discover toxicology content within Bookshelf.

- What Toxicology content is collected by NLM?
- How can I find Toxicology content in Bookshelf?
 - Using Advanced Search
 - Using Browse Titles
- What types of Toxicology content does Bookshelf collect?
- Where does Toxicology content in Bookshelf come from?

What Toxicology content is collected by NLM?

According to the [American College of Medical Toxicologists](#), medical toxicology is a field of medicine dedicated to the evaluation and treatment of poisoned patients. Some of the problems they evaluate include unintentional and intentional overdoses, exposure to industrial chemical products and environmental hazards, substance use disorder management, diagnosis and management of certain exposures, and independent medical examinations to assess injury or disability resulting from toxic exposures. Please see the [NLM guidelines for toxicology](#) for additional information on the scope of collecting toxicology content within the National Library of Medicine.

How can I find Toxicology content in Bookshelf?

Using Advanced Search

To explore toxicology resources within NCBI Bookshelf, follow these steps in the advanced search feature.

Step 1: Change the Builder drop down menu to “Resource Type”

Step 2: Click “Show index list”

Step 3: Select “toxicology resource” from the list

This will create the following query: **“toxicology resources”[Resource Type]**

Note: You can refine your search by adding relevant keywords in the second search field

Using Browse Titles

- You can also browse titles in Bookshelf by specific publishers. On the Bookshelf homepage, below the search bar, **click “Browse Titles”**. From the **“Publishers”** box on the left-hand side of the screen, select a publisher. Alternatively, enter search terms and then limit your results by selecting a specific publisher. You can further **narrow your search by resource types using the “Types”** box. For more details, refer to the [Bookshelf Help](#) guide.

The screenshot shows the 'Browse Titles' page in the Bookshelf system. At the top, there is a search bar with a dropdown menu set to 'Books' and a 'Search' button. Below the search bar, there are links for 'Browse Titles' and 'Advanced'. A callout box labeled 'Step 1: click “Browse Titles”' points to the 'Browse Titles' link.

Below the search bar, there is a section for filtering. It includes a 'Filter term:' input field, a dropdown menu set to 'in Title or Contributor', and 'Go' and 'Reset' buttons. A callout box labeled 'Step 2: Select publisher of choice' points to the 'Types' section on the left.

On the left side, there are three main sections: 'Types', 'Publishers', and 'Versions/Editions'. The 'Types' section lists various resource types with their counts: All Types, Report (9554), Book (1406), Collection (98), Database (44), and Documentation (25). A callout box labeled 'Note: You can filter results by resource type' points to this section. The 'Publishers' section lists various publishers with their counts: All Publishers, National Academies Press (US) (2435), Canadian Agency for Drugs and Technologies in Health (1614), National Institute for Health and Care Excellence (NICE) (1592), National Institute for Health and Care Research (1578), and Agency for Healthcare Research and Quality (US) (610). A 'More' button is visible at the bottom of this list. The 'Versions/Editions' section has two options: 'Current titles in Bookshelf' and 'Include previous versions/editions'.

On the right side, there is a 'Display Settings' section with a checked box for 'Sorted by Pub Date (Reverse)'. Below this, there is a list of 11127 titles. The first four titles are shown, each with a checkbox, a thumbnail, and a title link. The titles are: 1. Evidence review for referral for bariatric surgery: Weight management suite: Evidence review C. (Report, Systematic Reviews), 2. Evidence reviews for the management of luminal obstruction in adults with oesophageal cancer not amenable to treatment with curative intent: Oesophago-gastric cancer: assessment and management in adults: Evidence review A. (Report, Systematic Reviews), 3. Evidence reviews for identification of hypopituitarism (when to investigate): Head Injury: assessment and early management: Evidence review N. (Report, Systematic Reviews), and 4. Evidence reviews for tranexamic acid: Head injury: assessment and early management: Evidence review A. (Report, Systematic Reviews). At the top right of the results area, there are links for 'Send to' and 'Save link'.

What formats of Toxicology content does Bookshelf collect?

Booksshelf [Resource Type]
Browse Titles Create alert Advanced

Previous versions or editions
Include in the search result

Publication date
1 year
5 years
10 years
Custom range...





Added to Bookshelf
60 days
1 year
5 years
Custom range...

Resource types
Report
Book
Collection
Documentation
Database

Clear all
Show additional filters

Display Settings: Summary, 20 per page, Sorted by Relevance Send to: ▼

Results: 1 to 20 of 668 books (85832 items) << First < Prev Page 1 of 34 Next > Last >>

-  [LiverTox: Clinical and Research Information on Drug-Induced Liver Injury \[Internet\].](#)
Bethesda (MD): National Institute of Diabetes and Digestive and Kidney Diseases; 2012-.
▶ [Top results in this book](#) [Table of Contents](#)
-  [Drugs and Lactation Database \(LactMed®\) \[Internet\].](#)
Bethesda (MD): National Institute of Child Health and Human Development; 2006-.
▶ [Top results in this book](#) [Table of Contents](#)
-  [15th Report on Carcinogens \[Internet\].](#)
National Toxicology Program.
Research Triangle Park (NC): National Toxicology Program; 2021 Dec 21.
▶ [Top results in this book](#) [Table of Contents](#)
-  [Re-evaluation of Some Organic Chemicals, Hydrazine and Hydrogen Peroxide.](#)
IARC Working Group on the Evaluation of Carcinogenic Risks to Humans.
Lyon (FR): International Agency for Research on Cancer; 1999. (IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, No. 71.)
▶ [Top results in this book](#) [Table of Contents](#)

Bookshelf includes full-text toxicology reports, assessments, and technical reports. You can filter results on the left sidebar by the following content types.

Report: Technical reports detail the progress or results of scientific, technical, or policy research often in response to a narrowly defined research need. Reports in Bookshelf also include systematic reviews and clinical practice guidelines.

Systematic reviews are characterized by a methodical and replicable methodology and presentation. They involve a comprehensive search to locate all relevant published and unpublished work on a subject; a systematic integration of search results; and a critique of the extent, nature, and quality of evidence in relation to a particular research question.

Clinical practice guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.

Book – Publications that are complete in one volume or a limited number of volumes. In Bookshelf this includes multi-chapter monographs, contributed reference books, and contributed funded chapters.

Collection – A collection of similarly developed and reviewed publications of a similar format funded by the same funder or published by the same publisher.

Documentation – Documentation about a program, product, or service of the National Library of Medicine.

Database – A database is a collection of individual records (often categorized by subject matter) that are most often standardized in both format and content. LiverTox and LactMed are the main databases for toxicology content in the NCBI Bookshelf.

Where does Toxicology content in Bookshelf come from?

The NCBI Bookshelf does not author or publish toxicology content. Instead, it collaborates with scholarly and non-commercial publishers, such as government agencies and NGOs, to make this content accessible and discoverable through its full-text repository.

Some of the main contributors of toxicology assessments, reviews, and reports in Bookshelf include the following agencies. You can use the corresponding PubMed query to find their selected indexed full-text content in PubMed:

Organization	PubMed Query
Agency for Toxic Substances and Disease Registry (ATSDR)	"Agency for Toxic Substances and Disease Registry"[publisher] AND pmcbook
International Agency for Research on Cancer (IARC)	("IARC Monographs" AND pmcbook) OR "IARC Monogr Eval Carcinog Risks Hum"[jour]
National Academies Press (NAP)	"National Academies Press"[publisher] AND pmcbook AND toxicology
National Institute of Child Health and Human Development (NICHD)	"National Institute of Child Health and Human Development "[publisher] AND pmcbook
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	"LiverTox" AND pmcbook
National Institute for Public Health and the Environment (RIVM)	"ConsExpo" AND pmcbook
National Toxicology Program (NTP)	((("National Toxicology Program"[publisher] OR "National Institute of Environmental Health Sciences"[publisher]) AND pmcbook) OR ("NTP Monogr"[jour] OR "Natl Toxicol Program Genet Modif Model Rep"[jour] OR "Natl Toxicol Program Tech Rep Ser"[jour] OR "Toxic Rep Ser"[jour]))
U.S. Environmental Protection Agency (US EPA)	"U.S. Environmental Protection Agency"[publisher] AND pmcbook

Sources

Technical Reports - Collection Development Guidelines of the National Library of Medicine - NCBI Bookshelf (nih.gov)

Books - Citing Medicine - NCBI Bookshelf (nih.gov)

Databases/Retrieval Systems/Datasets on the Internet - Citing Medicine - NCBI Bookshelf (nih.gov)

Discovery by Format

- Bookshelf Format Queries
- Textbooks & Reference Works Discovery Guide
- Clinical Guidelines and Systematic Reviews Discovery Guide

Bookshelf Format Queries

The following queries help you find reference information indexed in Bookshelf that match formats in scope for Bookshelf. You can refine these queries by combining them with other Bookshelf reference queries relevant to your search.

These queries were developed to help users find relevant content based on MeSH publication types or other formats that are meaningful to users and significant to the Bookshelf collection.

National Library of Medicine Collected Subject Areas with Holdings in Bookshelf	
Format (Hyperlinked to a scope description)	Bookshelf Query (Hyperlinked to results in Bookshelf)
Atlases	"atlas"[pt]
Catalogs	"catalog"[pt]
Clinical Practice Guidelines	"practice guideline"[pt] OR "clinical guidelines"[Resource Type]
Collected Works	"collected work"[pt]
Databases	"database"[pt] OR "database"[Resource Type]
Developing Countries Publications	"AOSIS"[publisher] OR "ISEAS"[publisher] OR "Istanbul Research"[publisher] OR "Orient"[publisher] OR "Panamericana"[publisher] OR "Rosario"[publisher] OR "Rio Grande"[publisher]
Dictionaries and Encyclopedias	"dictionary"[pt] OR "encyclopedia"[pt]
Edited Reference Works	"reference works"[Resource Type]
Government Publications	"Health Care Policy"[publisher] OR "Healthcare Research"[publisher] OR "Planning and Evaluation"[publisher] OR "Toxic Substances"[publisher] OR "Canadian Agency"[publisher] OR "Disease Control"[publisher] OR "Medicare"[publisher] OR "Dutch Institute"[publisher] OR "Drug Administration"[publisher] OR "Human Services"[publisher] OR "Health Resources"[publisher] OR "International Agency"[publisher] OR "Reproductive Health"[publisher] OR "Health Economics"[publisher] OR "Indian Health"[publisher] OR "Quality and Efficiency"[publisher] OR "Minnesota"[publisher] OR "Translational Sciences"[publisher] OR "Biotechnology Information"[publisher] OR "Collaborating Centre"[publisher] OR "Health Statistics"[publisher] OR "Cancer Institute"[publisher] OR "Care Research"[publisher] OR "Blood Institute"[publisher] OR "Care Excellence"[publisher] OR "Child Health"[publisher] OR "Drug Abuse"[publisher] OR "Craniofacial Research"[publisher] OR "Kidney Diseases"[publisher] OR "Environmental Health"[publisher] OR "National Institutes"[publisher] OR "National Institute"[publisher] OR "Norwegian Institute"[publisher] OR "National Joint"[publisher] OR "National Library"[publisher] OR "Nigerian"[publisher] OR "National Toxicology"[publisher] OR "Surgeon General"[publisher] OR "Moscow Healthcare"[publisher] OR "Swedish Agency"[publisher] OR "USDA"[publisher] OR "Environmental Protection"[publisher] OR "Veterans Affairs"[publisher] OR "International Bank"[publisher] OR "World Health"[publisher]
Handbooks and Manuals	"handbook"[pt] OR "manual"[pt] OR ("handbook"[title] AND book[type]) OR ("manual"[title] AND book[type] NOT "therapy"[title] NOT "treatment"[title] NOT "physiotherapy"[title] NOT "skills"[title] NOT "non-manual"[title])
Laboratory Manuals	"laboratory manual"[pt] OR "assayguide"[book]
Monographs	monographs[Resource Type]
Reviews	"review"[pt]

Table continued from previous page.

National Library of Medicine Collected Subject Areas with Holdings in Bookshelf	
Format (Hyperlinked to a scope description)	Bookshelf Query (Hyperlinked to results in Bookshelf)
Standards and Guidelines	"guideline"[pt] OR "clinical guidelines"[Resource Type]
Statistical Works	"statistics"[pt] OR "statistical works"[Resource Type]
Study Guides	"study guide"[pt]
Systematic Reviews	"systematic review"[pt] OR "systematic reviews"[Resource Type]
Technical Reports	"technical report"[pt] OR "report"[Resource Type]
Textbooks	"textbooks"[Resource Type]

Textbooks & Reference Works Discovery Guide

Textbooks and reference works are the most heavily accessed content in Bookshelf, a trend that has remained consistent throughout Bookshelf's history. In fact, Bookshelf began in 1999 with Alberts' *Molecular Biology of the Cell* to provide high-quality reference information to support the understanding of original studies and reviews indexed in PubMed.

- What do textbooks & reference works mean in Bookshelf?
- How to find textbooks & reference works in Bookshelf?
 - Using Advanced Search
 - Browsing titles via subjects

What do textbooks & reference works mean in Bookshelf?

While there is significant overlap between the two, **textbooks** in Bookshelf are primarily edited for educational purposes, while **reference works** include contributed monographs, edited works, or collections of structured reviews with multiple contributors. These references works are used for research, education, and health professional practice.

How to find textbooks & reference works in Bookshelf?


Using Advanced Search

To start exploring textbooks or reference works within NCBI Bookshelf, follow these steps in the advanced search feature.

Step 1: Change the "Builder" drop-down menu to "Resource Type"

Step 2: Click "Show index list"

Step 3: Select "textbooks" or "reference works" from the list


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Books Advanced Search Builder

✔ Filters removed.

"textbooks"[Resource Type]

[Edit](#) [Clear](#)

Builder

Resource Type ▾

"textbooks"[Resource Type]

[Hide index list](#)

- medical genetics resources (28570)
- methods resources (31054)
- microbiology resources (14513)
- monographs (8363)
- reference works (274565)
- report (827929)
- statistical works (16317)
- systematic reviews (354120)
- textbooks (36503)
- toxicology resources (86194)

[Previous 200](#)
[Next 200](#)

[Refresh index](#)

AND ▾

All Fields ▾

[Show index list](#)

Browsing titles by subjects

NCBI Bookshelf offers a variety of textbooks that can be navigated by subject. To browse these textbooks:

Step 1: Navigate to “Browse Titles”

Step 2: Enter search term for the subject of interest

Step 3: Select ‘Book’ from the Types menu

Bookshelf

Books ▾

Search

[Browse Titles](#)
[Advanced](#)
[Help](#)
[Disclaimer](#)

Browse Titles

Select a category or enter filter term below.

Filter term: ✕ in Title or Contributor Go Reset

Types

All Types

- Report (94)
- Book (25)
- Collection (3)
- Database (1)

[More](#)

Publishers

All Publishers

- American Society for Microbiology (63)
- National Academies Press (US) (32)
- Taylor & Francis (11)
- Morgan & Claypool Life Sciences (2)
- Springer (2)





[More](#)

Versions/Editions

- Current titles in Bookshelf
- Include previous versions/editions

Display Settings: Sorted by Pub Date (Reverse) [Send to:](#) [Save link:](#)

25 Titles for "biology"

-  [Streptococcus pyogenes: Basic Biology to Clinical Manifestations \[Internet\]. 2nd edition.](#)
 1. Ferretti JJ, Stevens DL, Fischetti VA, editors.
 Oklahoma City (OK): University of Oklahoma Health Sciences Center; 2022 Oct 8.
 Book, Microbiology Resources, Reference Works
-  [RNA, the Epicenter of Genetic Information: A new understanding of molecular biology.](#)
 2. Mattick J, Amaral P.
 Abingdon (UK): CRC Press; 2022 Sep 20.
 Book, Medical Genetics Resources, Monographs
-  [Critical Points for the Organisation of Test Performance Studies in Microbiology: Plant Pathogens as a Case Study \[Internet\].](#)
 3. Vučurović A, Mehle N, Anthoine G, et al., editors.
 Cham (CH): Springer; 2022.
 Book, Microbiology Resources, Reference Works
-  [Essentials of Glycobiology \[Internet\]. 4th edition.](#)
 4. Varki A, Cummings RD, Esko JD, et al., editors.

Clinical Guidelines and Systematic Reviews Discovery Guide

Bookshelf has an extensive collection of clinical guidelines and systematic reviews.

- What are Clinical Guidelines and Systematic Reviews?
- How can I find Clinical Guidelines and Systematic Reviews in Bookshelf?
 - Using Advanced Search
 - Discovery by Programmatic Access

What are Clinical Guidelines and Systematic Reviews?

Clinical guidelines assist the health care practitioner with patient care decisions about appropriate diagnostic, therapeutic, or other clinical procedures for specific clinical circumstances. Trustworthy clinical guidelines are evidence-based and meet the **standards of the Institute of Medicine**. The evidence on which guidance is based is often published as one or more related systematic review.

Systematic reviews are reviews of the primary literature in health and health policy that attempt to identify, appraise, and synthesize all the empirical evidence that meets specified eligibility criteria to answer a given research question. Its conduct uses explicit methods aimed at minimizing bias to produce more reliable findings regarding the effects of interventions for prevention, treatment, and rehabilitation that can be used to inform decision making.

How can I find Clinical Guidelines and Systematic Reviews in Bookshelf?

Using Advanced Search

To start exploring clinical guidelines or systematic reviews within NCBI Bookshelf, follow these steps:

Step 1: Change the “Builder” drop down menu to “Resource Type”

Step 2: Click “Show index list”

Step 3: Select “clinical guidelines” and/or “systematic reviews” from the list

This will result in the following query: "[clinical guidelines](#)"[Resource Type] OR "[systematic reviews](#)"[Resource Type]

Discovery by Programmatic Access

About 75% of the clinical guidelines and systematic reviews in the Bookshelf collection are also available for mining and reuse through [Bookshelf's FTP service](#). To locate a specific title or set of clinical guidelines or systematic reviews via this service, refer to this [file list](#) updated monthly.

Each list entry includes the following information:

- The fully qualified name of the .tar.gz file for a book, with directory structure
- Citation details:
 - Book title
 - Publisher
 - Publication date
- The accession number for the title, a unique, persistent ID that can be used to display it in Bookshelf
- Last updated (YY-MM-DD HH:MM:SS)
- Bookshelf Categories