AI Literature Search Tools

What are AI literature search tools?
There are several new literature search tools that attempt to harness the power of generative AI to help with literature searching. These AI tools rapidly sift through large amounts of publications and identify potentially relevant resources based on keywords and citation matching.

What are the advantages of AI literature search tools?
Tools like Consensus, Semantic Scholar, and Scopus AI are easy to search. They allow users to ask natural language questions and they return answers quickly. One advantage is the quick return of potentially relevant references. The quick ask and answer function allows researchers to jump start their literature search and find potential gaps in the literature. In addition, AI literature search tools pull from databases or publisher sites so the references should not be hallucinated like other generative AI tools (aka ChatGPT).

What are the drawbacks to using AI literature search tools?
Most AI literature search tools can only return a small number of results. For instance, Scopus AI only searches the past 10 years. Other tools like Elicit only return four results at a time. Additionally, AI literature search tools are not always transparent about where the literature is coming from. Lastly, AI literature search tools almost always require a subscription fee for full functionality.

Can I use an AI literature search tool for my literature search?
AI literature search tools can be useful for preliminary literature searches. However, AI tools are not comprehensive or reliable enough to be
the only tool you use for your search. Depending on the type of review you are writing, there are different search methodologies that may be required.

Here are a few best practices when using AI tools for literature searching:

- **Review results for accuracy** – Some AI tools have been known to create false references. Make sure you can verify each reference by reviewing the full-text paper.

- **Review article summaries for accuracy** – Some of these tools offer summaries. These summaries may be misleading or incomplete, so review the full text of the article. If you can't find the full text, request the article for free through the library's interlibrary loan service.

- **Write your own literature review (or revise your AI-written review)** – Literature reviews written by ChatGPT are often short, vague, and can be biased. If you are going to use an AI tool for creating text, be sure to modify the text into your own words. Publishers are now able to review manuscripts for use of AI, so be sure to review the author guidelines for your journal to make sure you are following the publisher's guidelines. In addition, MD Anderson employees should not share any confidential or patient information to open AI tools. If you need help editing your manuscript or have a writing question, contact the library's Scientific Editors.

- **Use academic databases as well as AI tools** – AI tools don't tell you which journals they do or don't have access to. Be sure to check databases like PubMed, Scopus or others to confirm that you've found all of the relevant literature on your topic. AI tools often don't search far back in time and may miss the most highly cited articles.

- **Do not use AI tools for systematic review searches** – AI tools do not provide the proper transparency or reproducibility required for a systematic review search. Work with an expert searcher to learn the proper methodology for systematic reviews. Note: The library provides Covidence for screening systematic review search results. Covidence has an AI predictive tool that helps streamline the screening process and save you time. Ask a librarian for more information.
• **Ask a Librarian** – If you have questions about literature searching or using AI tools for literature searching, contact a librarian for a consultation or customized literature search.

**Register for our class on AI Tools for Literature Searching**
June 20; 11:00am

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### New Resource: Henry Stewart Talks

Would you like to view seminar-style lectures from leading experts in the Biomedical & Life Sciences? The Research Medical Library now provides access to the Henry Stewart Talks – Biomedical & Life Sciences Collection, which includes over 3,400 lectures in healthcare and life sciences. Lectures are developed by experts, researchers, and practitioners from various industries and institutions, including some MD Anderson faculty and staff. Each talk is 30-60 minutes long and can be streamed or downloaded along with slide presentations and handouts. New content is added monthly and can be used for internal education or personal interest and development. Contact the Research Medical Library for more information.

Recent Series on Cancer:
- The Molecular Basis of Cancer
- Cancer Therapies in the Personalized Medicine Era
- Oral & Maxillofacial Medicine

MD Anderson Faculty Featured on HST:
- George Calin
- Gordon Mills
- Osama Malawi
- Craig Jordan
How to Write a Structured Abstract

An abstract is a summary of a longer document, such as an original research paper. Most journals require you to submit an abstract with your manuscript. In most cases, an abstract can be understood without reading the full text of the paper, and there is typically a length restriction. However, abstracts vary in style and length from journal to journal. Many journals require a structured abstract.

What is a “structured” abstract?

A structured abstract includes subheadings. For example, a structured abstract accompanying an original research paper in which the main text is presented in four sections (Introduction, Methods, Results, and Discussion) may use four analogous subheadings: Background, Methods, Results, and Conclusions. These are the most common subheadings used in a structured abstract.¹

However, some journals require more detailed subheadings in a structured abstract, especially for papers reporting prospective research results. These detailed subheadings are based on the CONSORT (Consolidated Standards of Reporting Trials) checklist.² For example, the journal Diseases of the Colon and Rectum requires 11 subheadings in a structured abstract, as outlined in the journal author instructions.

Other types of research (besides prospective studies) may also use detailed checklists for both the full text and the abstract. Systematic reviews and meta-analyses use the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) guidelines, which include a checklist specifically for abstracts. A structured abstract accompanying a systematic review may include subheadings that are based on PRISMA.

Why use a structured abstract?
The subheadings in a structured abstract can help you ensure that the abstract includes all the information a reader needs to understand the research. This is especially important for readers who may not have access to the full text of the article. Even if you submit your manuscript to a journal that does not require a structured abstract, it is helpful to use subheadings when drafting your abstract—the subheadings can always be deleted later.

**Tips for drafting a structured abstract**

1. Keep in mind that the subsections of an abstract are not all the same length. For example, the Results subsection of an abstract is often longer than the other subsections. Here is a basic guideline for what to include in each subsection:
   - **Background:** what is known about your topic, gap in knowledge that your study is designed to fill, hypothesis or purpose of the study (2-3 sentences)
   - **Methods:** experimental approach, patients or materials, primary end points of the study (1 to 3 sentences)
   - **Results:** most important results, reflecting each method described in the methods subsection above, that are needed to support the conclusion of the research (3-4 sentences)
   - **Conclusion:** conclusion, based on the results, that answers the research question presented above as a hypothesis or purpose statement (1-2 sentences)

   For additional guidance on what to include in each section of your manuscript, including the abstract, see the RML education hub page on [writing a research article](#). For a more in-depth learning experience, you can view our self-paced course on [writing and publishing scientific articles](#).

2. In structured abstracts with several subheadings, such as in the journal instructions mentioned above, the information in each subsection need not be presented in complete sentences. For example, the Design subsection may look like this:
   - **Design:** phase III randomized placebo-controlled trial.
3. Although it is important to include all the necessary information in each subsection of the abstract, abstracts also have a length restriction. Balancing conciseness with completeness can be a challenge, and the subheadings are included in the abstract word count. Some tips on how to shorten your abstract can be found in a previous Library News article. For a more in-depth look at shortening abstracts, you can view this webinar: Writing and Publishing Scientific Articles Deep Dives: How to Shorten an Article Abstract.

And of course, you can always ask for assistance from an editor. Just email your abstract or manuscript to RML-Editing@mdanderson.org.

References


Summer Reading Recommendations

The Research Medical Library staff recommend summer reads they’ve enjoyed in recent years.
The Will of Many by James Islington. The trilogy isn't complete, but I loved this book! It started as the same old plot, and I was rolling my eyes in the first couple pages; joke's on me, though. I was hooked and couldn't put it down. There were twists I wasn't expecting and the whole book felt like a fresh take to me.

In my mind, a classic summer read is The Switch by Beth O'Leary. You’re never too old, or too young, to switch things up.
–Saryah Leyton

The Shipping News by Annie Proulx. A great summer read. It's a warm, funny, ingenious novel about heartbreak and new love and Newfoundland history and sensationalist journalism and fishermen and storms and second chances. And it's short and easy to read. It won the Pulitzer Prize and the National Book Award.
–Stephanie Deming

Turtles All the Way Down by John Green. (This will soon be a movie.) It's young adult. There's a focus on OCD and anxiety. It can be sad and happy—as all John Green books tend to be. One of the best quotes in the book: “What I love about science is that as you learn, you don’t really get answers. You just get better questions.”

His Majesty's Dragon by Naomi Novik. Fantasy. Napoleonic War with dragons. The first in a complete series. I'm a sucker for a good fantasy with dragons.

–Leslie Moore

Meet Me at the Museum by Anne Youngson. A nontraditional romance in which a man and woman in their later years exchange letters in which they
take stock of their lives as each faces changes and gets to know their grown children a little better.
–Erica Goodoff

In the oppressively hot Houston summer, I like to read books set in cold places. For nonfiction, I liked The Ice Balloon: S.A. Andree and the Heroic Age of Arctic Exploration by Alec Wilkinson and The Endurance: Shackleton's Legendary Antarctic Expedition by Caroline Alexander. For fiction, I'd recommend The Voyage of the Narwhal by Andrea Barrett and Disappearing Earth by Julia Phillips. This summer I plan to read A Dream in Polar Fog by Yuri Rytkheu and Floating Coast: An Environmental History of the Bering Strait by Bathsheba Demuth.
–Amy Ninetto

I've read two graphic books lately (both great for adults or kids). One is The Midnight Library by Kazuno Kohara. This was a nice bedtime read with lovely illustrations, and it features a librarian, so you know... it's awesome.

The other is Winnie the Pooh by Travis Dandro. Since Pooh was released into the public domain a few years ago, there have been reimaginings of the stories. I've loved Pooh since I was a kid and really enjoyed the new illustrations, and of course the stories are inspiring and uplifting. This was also printed by a smaller printing press, and I like to support small businesses!
–Laurissa Gann

How Far the Light Reaches: A Life in Ten Sea Creatures by Sabrina Imbler. Personal essays braided with biology, society, and fellow feeling with the weird.
–Sarah Bronson

Owls of the Eastern Ice by Jonathan Slaght was gifted to me by a birder friend who thought I’d enjoy it. It is an excellent story about the researcher's attempt
to document fish owls in their natural habitat in the wilderness of Russia. The field research descriptions and what he had to endure to be able to reach the location, find the birds, and capture and tag them with tracking devices are a wild adventure.

–Clara Fowler

*Gregor the Overlander* (Underland Chronicles, #1) by Suzanne Collins. This is a children’s series. But it is one of my favorites. Gregor and his sister Boots fall down an air duct in their New York City apartment and enter the word of the Underland. There’s rats, bats, and roaches! It’s a good time.

–Valerie Felan

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"*Alternate*" vs. "*Alternative*": Which Is the Correct Alternative?

In biomedical writing, *alternative* is intended more often than *alternate*. *Alternative* is used when a choice is offered (*e.g.*, alternative suggestions) or when something differs from conventional practice (*e.g.*, alternative treatments), whereas *alternate* is used when something occurs by turns or every other time (*e.g.*, alternating shifts) or when one thing substitutes for another (*e.g.*, alternate reviewers). *Alternative* and *alternate* can both be used as nouns, but only *alternate* can be used as a verb. Both terms can serve as adjectives, and both words have adverb forms (ending in -ly).

**Incorrect:**
Radiation therapy is an effective *alternate* to surgery in some patients.

**Correct:**
Radiation therapy is an effective *alternative* to surgery in some patients.
**Incorrect:**
Mary was chosen as an *alternative* for the jury.

**Correct:**
Mary was chosen as an *alternate* for the jury.

**Incorrect:**
We sought an *alternate* explanation.

**Correct:**
We sought an *alternative* explanation.

**Incorrect:**
Regimens X and Y were given *alternatively*.

**Correct:**
Regimens X and Y were given *alternately*.

**Also correct:**
We *alternated* regimen X and regimen Y.

**Bibliography**