Webinar: Using Science.gov to Access U.S. Government Science Information

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Outline

- Provide an overview of the federated search functionality offered by Science.gov where over 60 databases, 2,200 websites, and over 200 million pages of authoritative Federal science information can be found in many formats.

- Show new feature for public access to Federally-funded research results (journal articles and accepted manuscripts) will be discussed.

Science.gov

Science.gov is an interagency initiative providing a gateway to **U.S. government science information** offering free access to R&D results and scientific and technical information (STI) from the following federal agencies:

- Department of Agriculture (USDA, Forest Service)
- Department of Commerce (NTIS, NIST)
- Department of Defense
- Department of Education
- Department of Energy
- Department of Health and Human Services (NIH)
- Department of Homeland Security
- Department of Transportation
- Environmental Protection Agency
- Government Publishing Office
- National Aeronautics and Space Administration
- National Science Foundation

U.S. government science information/R&D results and STI include: Journal articles, technical reports, conference papers, videos, audio files, images, and other multimedia, scientific and technical data sets and collections.

History, Governance, and Operations

- Launched in 2002, Science.gov provided, for the first time, public search to the government's stores of STI.
- In 2004, federated search was implemented, offering real-time relevance ranking of the research results and STI made available by the federal agencies.
- Science.gov is governed by the Science.gov Alliance, a voluntary group U.S. federal scientific, technical and related departments, agencies and programs.
- The Science.gov Alliance is co-chaired by Department of Transportation and Department of Energy. The Office of Scientific and Technical Information (OSTI) hosts to website and provides the federated search technology.
- Support is provided by CENDI, a working group of high level scientific and technical information managers in science mission agencies.

Science.gov Main Features

→ Full-text searching
→ Advanced Search
→ Clustering
→ Alerts
→ Relevance ranked results which can be filtered by category (where content is available) including:

- **Text**: technical reports, conference papers, and other textual information.
- **Multimedia**: videos, audio files, images, and other multimedia.
- **Data**: scientific and technical data sets and collections.
- **Public Access**: peer-reviewed scholarly publications (journal articles) resulting from federally funded scientific research.

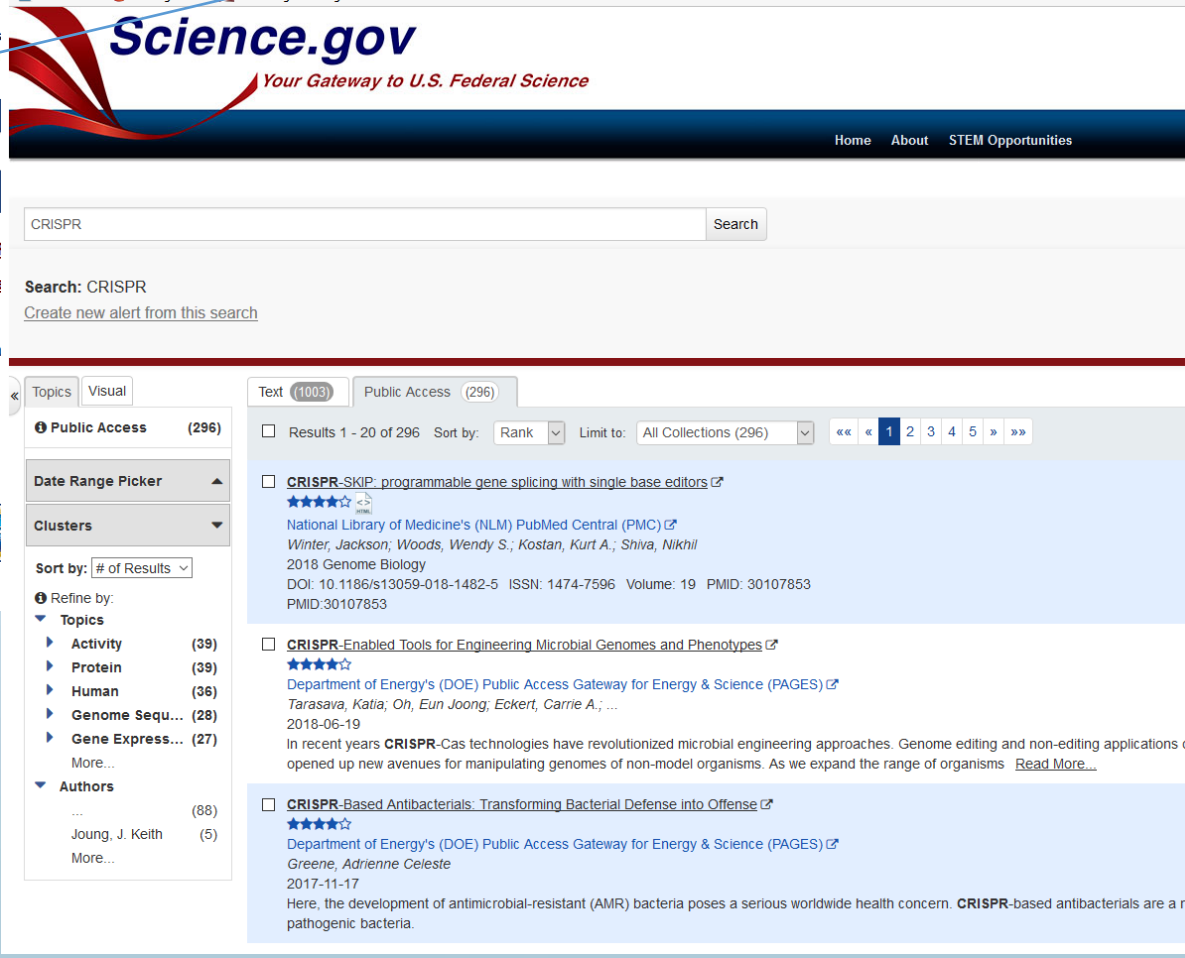
Search Technology

- Science.gov simultaneously searches (in real-time) selected sources using federated search.
- What is federated search? Instead of crawling and indexing static content like Google, Bing, and other popular search engines, or as opposed to Search.gov which searches government web pages, the federated search technology that Science.gov uses, Explorit Everywhere!, queries agencies selected collections and searches them simultaneously. While this usually takes a few seconds longer, it ensures a superior level of top results.
- When the federated search "connects" to these collections, results are aggregated, deduped, and returned in relevance ranked order providing the user with top-level results from all collections. Each result contains an information snippet, a link to the full information and a link to the host agency.
- Links to individual agency repositories (databases and other sources) are provided if users wish to view all results from the sources.

Why top-level results? By using federated search, and providing top-level results, users have a greater chance of getting the most relevant results from those sources rather than having to sift through thousands, if not millions of results.

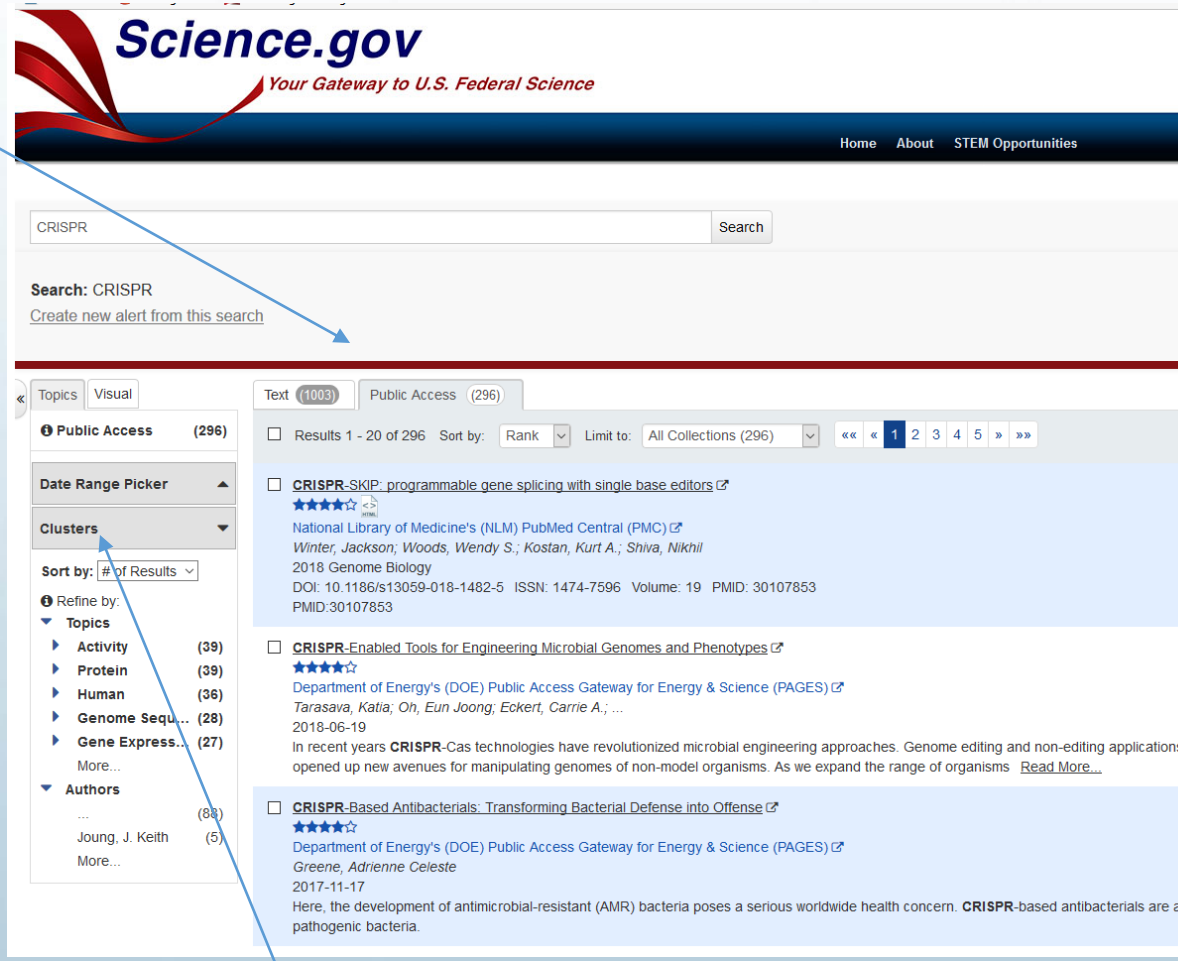
Search Example

Basic Search Query: CRISPR



Search Results

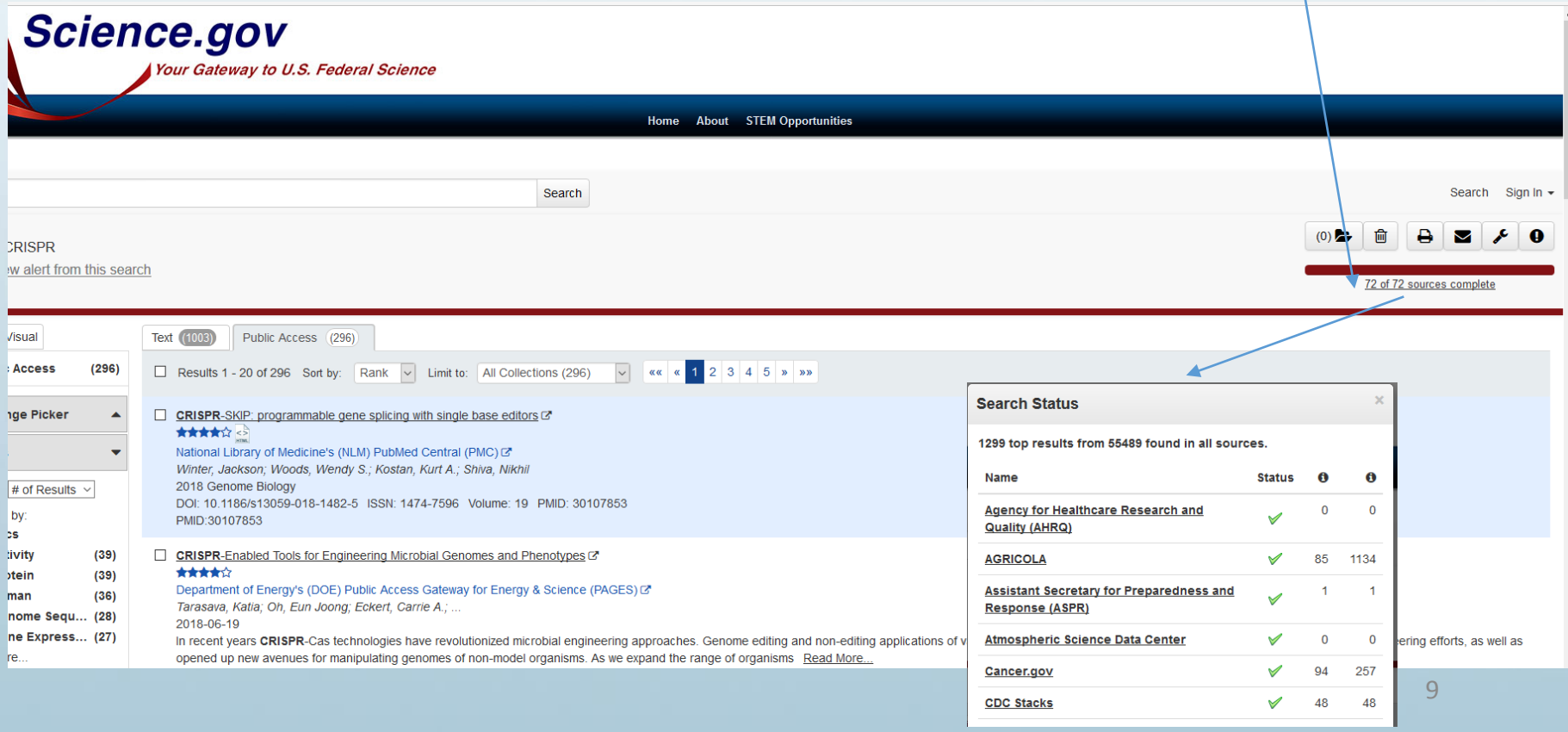
- For the search example, CRISPR, there were roughly 1,300 top level results that came back as text, and public access. That includes a combination of technical reports, conference papers, and accepted manuscripts/journal articles.
- The relevance of each result is denoted by stars (more stars indicate greater relevance) that appear beneath the title of each result.
- Up to 100 of the most relevant (top-level) results from each source are returned. Top-level results are those that meet the terms of the search query most closely.



Additionally, clustering is provided to give the user a sense of results in particular scientific categories related to the search term

Search Example

To see the number of all results for each source, click the “X of X sources complete” to open Search Status at the top-right of the search results page. When you click on the link, you will see the top-level results as well as any additional results (non top-level) that can be found at the source. If you wish to view these additional results, you will need to go to the source to search for those results. Each source name is hyperlinked, and you may navigate to that source directly from the search status box

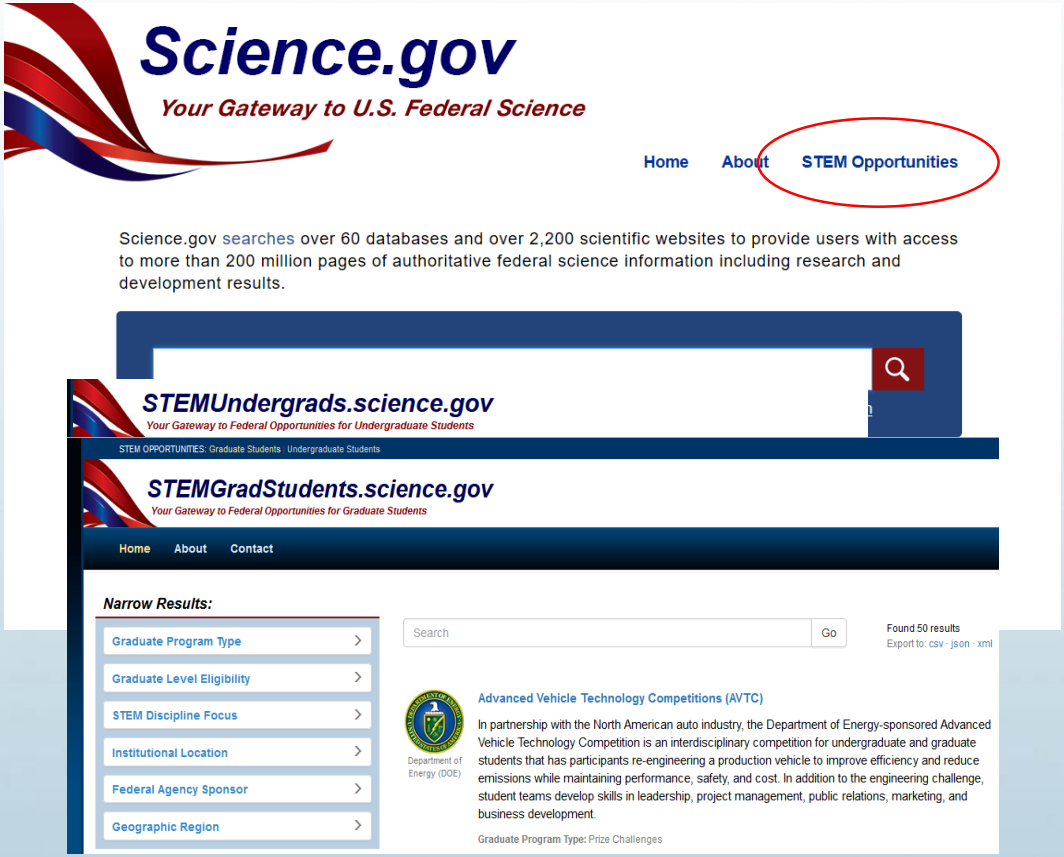


Other Features: 1) STEM Opportunities

Science.gov provides access to undergraduate and graduate Scientific, Technology, Engineering, and Math (STEM) opportunities ranging from scholarships, research internships, and graduate fellowships that are federally-funded.

Search STEM areas by:

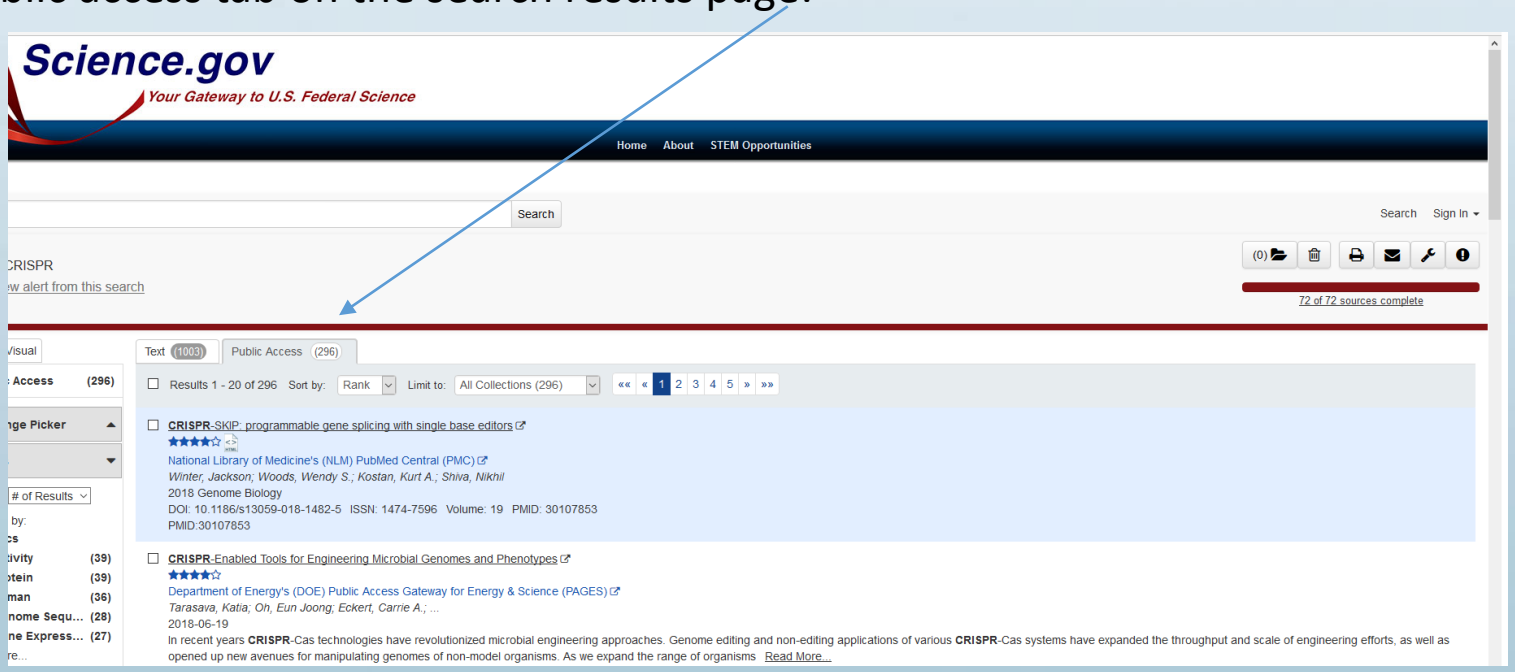
→ Program Type
→ Discipline
→ Location/Geographic Region
→ Agency Sponsor



Students can read descriptions of opportunities and get direct links for applying

Other Features: 2) Public Access

- Public Access is a broad federal-wide initiative which aims to increase access to federally funded, peer-reviewed scholarly literature (journal articles and accepted manuscripts) that have been published in peer-reviewed journals.
- Science.gov now provides the ability to limit search results to a category called Public Access. Public Access enables searching of peer-reviewed scholarly publications resulting from federally funded scientific research from the federal repositories supporting public access. *Public access results from 15 agencies are currently available*.
- You can narrow your search to the public access category of content by checking the public access tab on the search results page:



Other Features: 2) Public Access

The Science.gov homepage provides links to more information about Public Access. For example:

- U.S. Federal Science Agencies' Public Access Plans and requirements in those plans are available.

https://www.science.gov/publicAccess.html

- Information about agency submission systems: If you are a federally funded author or coauthor of peer-reviewed scientific publications and need to submit your accepted manuscripts to the funding agency(ies) for purposes of public access, you can learn **How To Submit Research Papers to Funding Agencies** from a single place.

https://www.science.gov/publicAccess.html

Global access

Science.gov is the U.S. member of WorldWideScience.org – a global science gateway comprised of national and international scientific databases and portals across 70 countries. WorldWideScience.org, like Science.gov, uses federated search, but users can translate search results in 10 different languages including:

- Arabic
- Chinese
- English
- French
- German
- Japanese
- Korean

What's Next?

In support of Public Access, a new feature will be launched in the upcoming month where users can select to search only the collection of public access results directly from the home page – that is, *peer-reviewed scholarly publications (journal articles) resulting from federally funded scientific research*

Questions/Discussion

More Information or Interested in joining Science.gov?

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