

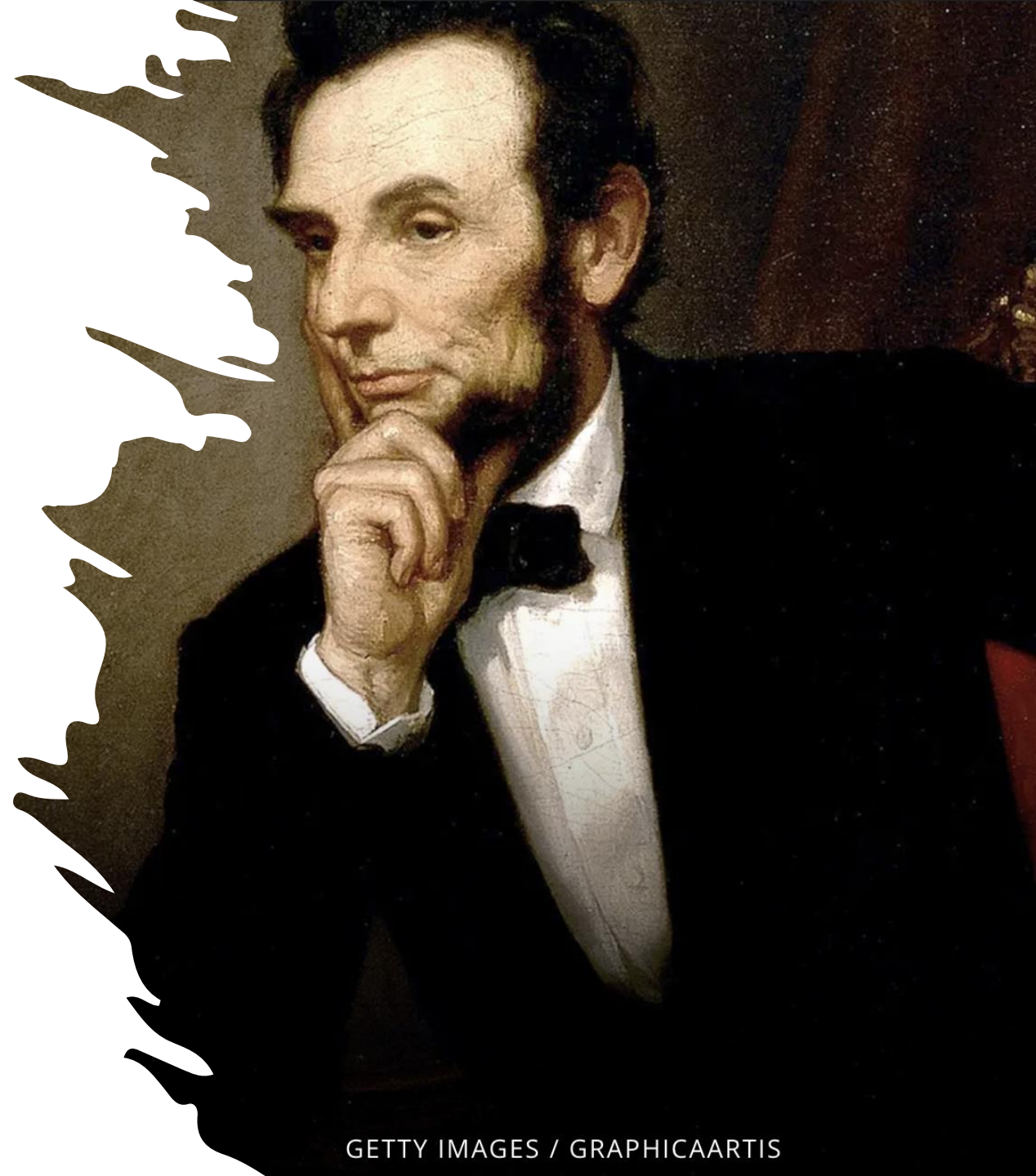
An aerial photograph of a city skyline, likely Manila, Philippines, viewed from a high vantage point. The foreground is filled with lush green trees and foliage. The middle ground shows a dense urban area with numerous high-rise buildings and residential structures. In the background, a large body of water (the bay) is visible, with a few more buildings on the distant shore under a blue sky with scattered white clouds.

Search and use of patent information: Introduction to databases

Sharon E. Crane, Ph.D., Haynes and Boone, LLP
ASIPI XXIV Work Sessions and Administrative Council, December 3, 2024

Before [the patent laws] any man might instantly use what another had invented; so that the inventor had no special advantage from his own invention. The patent system changed this; secured to the inventor, for a limited time, the exclusive use of his invention; and thereby added the fuel of interest to the fire of genius, in the discovery and production of new and useful things.

Abraham Lincoln (1859)




What are the strengths, abilities of various databases?

- Google patents
- Espacenet (EPO)
- PatentScope (WIPO)
- USPTO
- Patent Lens
- PubChem/SureChem
- NCBI Blast
- Thomson Reuters
- PatBase(Minesoft)
- Clarivate/Derwent

Google patents – Patent Number Search






Google patents – Application/patent info or text


SEARCH TERMS 



Search terms



SEARCH FIELDS


 Date · Priority 
YYYY-MM-DD – YYYY-MM-DD

 + Inventor


 + Assignee


Patent Office  Language 


Status  Type 

Litigation 

Search tools **Text** Classification Chemistry Measure Numbers



 Full documents Title Abstract Claims

 All Any Exact Not

Google patents – Classification

Search tools Text **Classification** Chemistry Measure Numbers


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Google patents - Chemistry

Search tools Text Classification **Chemistry** Measure Numbers

= Trade name, SMILES, InChI Key ?


 **Exact** Exact Batch Similar Substructure Substructure (SMARTS)


 **Full documents** Claims only

Add AND condition

Google patents - measures

Search tools Text Classification Chemistry **Measure** Numbers


 1.5 mm, 20 ft, 400-500 fahrenheit, 800 MHz, 0.01-100 mol


 activity, wavelength, embossing depth, absorption


Add AND condition


Google patents – numbers, countries

Search tools Text Classification Chemistry Measure **Numbers**

 Enter multiple Patent Application and Publication Numbers, one per line

 Application Numbers Publication Numbers **Either**

 Restrict search to these countries

 US, EP, WO, JP, CN

Espacenet – EPO – Title, Abstract or numbers

AND ▾ + Field ✕

Title ▾ all ▾ → Group

✕

Title or abstract ▾ all ▾ → Group

✕

OR ▾ + Field ✕

Publication number ▾

any ▾ → Group

✕

Application number ▾

any ▾ → Group

✕

Priority number ▾

any ▾ → Group

✕

Espacenet – Applicants, Inventors or Classification

OR ▾ + Field ✕

Applicants ▾ any ▾

→ Group

✕

Inventors ▾ any ▾

→ Group

✕

OR ▾ + Field ✕

CPC ▾ any ▾

→ Group

✕

IPC ▾ any ▾

→ Group

✕

PatentScope - WIPO


PATENTSCOPE Simple Search

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Field	▼	<input type="text" value="Search terms..."/>	
Front Page			

[Query Examples](#)

PatentScope - WIPO

PATENTSCOPE Advanced Search ▼

Search terms...

Query Assistant [Query Examples](#)



⊕ Expand with related terms


Offices All	▼
Languages English	▼
<input checked="" type="checkbox"/> Stemming	
<input type="checkbox"/> Single Family Member	
<input type="checkbox"/> Include NPL	

Patent Lens – Lens.org

The screenshot displays the Lens.org Patent Lens interface. At the top, the navigation bar includes the LENS.ORG logo, language selection (English - EN), and various utility links like 'Our Apps', 'Pricing', 'About', 'Guest Work Area', 'Register / Sign in', and 'Support'. Below the navigation bar, a breadcrumb trail shows '159,886,436 Patents (91,832,142 Simple families)'. The main content area is titled 'New Patent Search' and shows 'Patents (159,886,436) = All Docs'. A summary bar indicates 'Filters: No filters applied' and provides a breakdown of search results: Patent Records (159,886,436), Simple Families (91,832,142), Extended Families (88,721,411), Cites Patents (51,036,644), and Cited By Patents (59,444,536). The interface includes a 'Structured Search' section with a 'Field' dropdown set to 'All Fields' and a search input containing 'e.g. malaria'. A 'Data Set' section on the right provides information about the patent data, including a 'Last updated' date of Nov 14, 2024 (Release 202446) and a brief description of the data's coverage and update frequency. A world map is visible at the bottom right of the interface.

Patent Lens – Lens.org

 Applicants 

Search Applicant Name Exact... 

- Samsung Electronics Co LTD (780,703)
- Canon Kk (663,597)
- Matsushita Electric Ind Co LTD (593,469)
- Hitachi LTD (581,533)
- Mitsubishi Electric Corp (535,319)
- Siemens Ag (512,526)
- Ibm (503,077)
- Sony Corp (471,705)
- Fujitsu LTD (417,362)
- Nec Corp (383,692)

⋮ Load More

 Inventors 

Search Inventor Name Exact... 

- The Inventor Has Waived the Right to Be Mentioned (218,522)
- Wang Wei (139,594)
- Zhang Wei (122,334)
- Li Wei (106,261)
- Wang Lei (101,420)
- Zhang Lei (97,296)
- Wang Jun (93,954)
- Liu Wei (93,537)
- Liu Yang (85,790)
- Li Jun (83,700)

⋮ Load More

 Agents & Attorneys 

Search Agent Name Exact... 

- Hoffmann Eitle (112,958)
- Sughrue Mion Pllc (86,558)
- Fish & Richardson Pc (75,952)
- Birch Stewart Kolasch & Birch Llp (72,220)
- Vossius & Partner (72,111)
- Grünecker Patent- Und Rechtsanwälte Partg Mbb (56,729)
- Harness Dickey & Pierce Plc (55,811)
- Knobbe Martens Olson & Bear Llp (53,415)
- Fitzpatrick Cella Harper & Scinto (51,433)
- Cantor Colburn Llp (48,649)

Patent Lens – Lens.org

Document Type	
<input type="checkbox"/> Patent Application	(72,196,295)
<input type="checkbox"/> Granted Patent	(47,429,690)
<input type="checkbox"/> Limited Patent	(30,436,562)
<input type="checkbox"/> Unknown	(2,972,687)
<input type="checkbox"/> Search Report	(2,334,584)
<input type="checkbox"/> Design Right	(1,455,385)
<input type="checkbox"/> Patent of Addition	(978,994)
<input type="checkbox"/> Abstract	(442,136)
<input type="checkbox"/> Amended Patent	(329,444)
<input type="checkbox"/> Amended Application	(69,508)
<input type="checkbox"/> Ambiguous	(61,238)
<input type="checkbox"/> Plant Patent	(37,731)
<input type="checkbox"/> SPC	(4,508)
<input type="checkbox"/> Statutory Invention Registration	(4,146)

Biologicals	
Sequence Type	
<input type="checkbox"/> Nucleotide	<input type="checkbox"/> Amino Acids
Search Biological Organism Name Exact	
<input type="checkbox"/> Unknown/Artificial	(801,139)
<input type="checkbox"/> Homo sapiens	(316,212)
<input type="checkbox"/> Mus musculus	(71,735)
<input type="checkbox"/> Escherichia coli	(25,870)
<input type="checkbox"/> Rattus norvegicus	(23,507)
<input type="checkbox"/> Arabidopsis thaliana	(17,826)
<input type="checkbox"/> Bos taurus	(14,680)
<input type="checkbox"/> Zea mays	(13,269)
<input type="checkbox"/> Saccharomyces cerevisiae	(12,911)
<input type="checkbox"/> Oryza sativa	(12,142)

Cited Works	
<input type="checkbox"/> Basic Local Alignment Search Tool	(17,248)
Stephen F Altschul, Warren Gish, Webb Mi... Journal of molecular biology 215: 403-410 ...	
<input type="checkbox"/> Review ArticlePharmaceutical Salts	(14,721)
Stephen M Berge, Lyle D Bighley, Donald ... Journal of pharmaceutical sciences 66: 1-19 1977 ...	
<input type="checkbox"/> A general method applicable to the search for similarities in the amino acid sequence of two proteins	(12,924)
Saul B Needleman, Christian D Wunsch Journal of molecular biology 48: 443-453 1970 ...	
<input type="checkbox"/> Continuous cultures of fused cells secreting antibody of predefined specificity	(12,314)
G Köhler, C Milstein Nature 256: 495-497 ...	

HAYNES BOONE

PubChem

The screenshot shows the PubChem website homepage. At the top left is the NIH logo and the text "National Library of Medicine National Center for Biotechnology Information". Below this is the PubChem logo and navigation links for "About", "Docs", "Submit", and "Contact". The main heading is "Explore Chemistry" with the tagline "Quickly find chemical information from authoritative sources". A search bar is present with a magnifying glass icon. Below the search bar are several search suggestions: "Try aspirin EGFR C9H8O4 57-27-2 C1=CC=C(C=C1)C=O InChI=1S/C3H6O/c1-3(2)4/h1-2H3". There are also radio buttons for "Use Entrez", "Compounds", "Substances", and "BioAssays". At the bottom, there are four icons with labels: "Draw Structure", "Upload ID List", "Browse Data", and "Periodic Table".

NIH National Library of Medicine
National Center for Biotechnology Information

PubChem About Docs Submit Contact

Explore Chemistry

Quickly find chemical information from authoritative sources

Try aspirin EGFR C9H8O4 57-27-2 C1=CC=C(C=C1)C=O InChI=1S/C3H6O/c1-3(2)4/h1-2H3

Use Entrez Compounds Substances BioAssays

Draw Structure Upload ID List Browse Data Periodic Table

PubChem

DRAW STRUCTURE

Broadband ▾		SMILES ▾														
New	Undo	Ctrl	Sty	Del	Qry											
								S/A	D/A	S/D						
							CHO	CO ₂ H	NO ₂	SO ₃ H						
H		?	? ▾													He
Li	Be				B	C	N	O	F	Ne						
Na	Mg				Al	Si	P	S	Cl	Ar						
K	Ca	Sc	Sc ▾		Ga	Ge	As	Se	Br	Kr						
Rb	Sr	Y	Y ▾		In	Sn	Sb	Te	I	Xe						
Cs	Ba	Lu	Lu ▾		Tl	Pb	Bi	Po	At	Rn						
Export	MDL Molfile ▾														Done	
Hydrogen	Keep AsIs ▾														Help	
Import	Choose File	No file chosen														

Search for This Structure

NCBI Basic Local Alignment Search Tool (BLAST)

The screenshot shows the NCBI BLAST website. At the top left is the NIH logo and the text "National Library of Medicine National Center for Biotechnology Information". A "Log in" button is in the top right. Below the header is a navigation bar with "BLAST®" on the left and "Home Recent Results Saved Strategies Help" on the right. The main content area features a "Basic Local Alignment Search Tool" section with a description: "BLAST finds regions of similarity between biological sequences. The program compares nucleotide or protein sequences to sequence databases and calculates the statistical significance." A "Learn more" link is provided. To the right is a "NEWS" box with the title "Non-interactive searches of nt switch to core_nt", the text "Starting late September 2024 all non-interactive WebBLAST and PrimerBLAST searches of ``nt`` will", the date "Tue, 24 Sep 2024", and a "More BLAST news..." link. Below this is the "Web BLAST" section with three main options: "Nucleotide BLAST" (nucleotide to nucleotide), "blastx" (translated nucleotide to protein), and "tblastn" (protein to translated nucleotide). To the right of these is a "Protein BLAST" option (protein to protein). At the bottom is the "BLAST Genomes" section with a search input field containing the placeholder "Enter organism common name, scientific name, or tax id" and a "Search" button. Below the input field are links for "Human", "Mouse", "Rat", and "Microbes".

NCBI Basic Local Alignment Search Tool (BLAST)

BLAST® » blastn suite Home Recent Results S

Standard Nucleotide BLAST

blastn blastp blastx tblastn tblastx

BLASTN programs search nucleotide databases using a nucleotide query. more...

Enter Query Sequence

Enter accession number(s), gi(s), or FASTA sequence(s) [Clear](#) Query subrange [?](#)

From
To

Or, upload file No file chosen [?](#)

Job Title
Enter a descriptive title for your BLAST search [?](#)

Align two or more sequences [?](#)

Choose Search Set

Database Standard databases (nr etc.): rRNA/ITS databases Genomic + transcript databases Betacoronavirus Experimental databases

[?](#)

Organism Optional exclude
Enter organism common name, binomial, or tax id. Only 20 top taxa will be shown [?](#)

Exclude Optional Models (XM/XP) Uncultured/environmental sample sequences

Limit to Optional Sequences from type material

Entrez Query Optional
Enter an Entrez query to limit search [?](#)

Program Selection

Optimize for Highly similar sequences (megablast)
 More dissimilar sequences (discontiguous megablast)
 Somewhat similar sequences (blastn)
Choose a BLAST algorithm [?](#)

Search database core_nt using Megablast (Optimize for highly similar sequences)
 Show results in a new window

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