



生物系の研究者必見！

# 生物医学分野の文献検索

**JAICI**  
化学情報協会

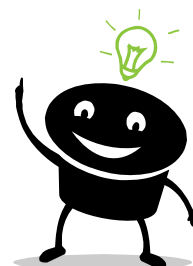
2

SciFinder って化学系の研究者が  
使う情報検索ツールよね？

PubMed を使っているから  
SciFinder は使わなくていいよね？



**SciFinder は生物系の  
研究者にも役立つツールです**



**JAICI**  
化学情報協会

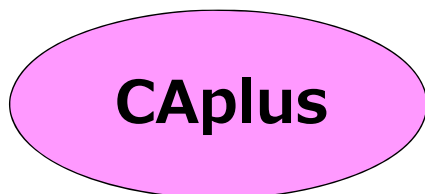
## 本日の内容

- キーワードからの文献検索
- 物質からの文献検索

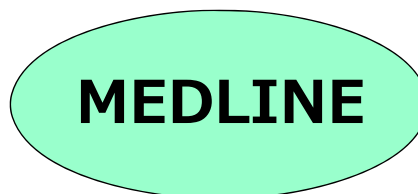
## キーワードからの文献検索

- SciFinder には, 2つの文献データベースが搭載されています.

化学系文献



生物系文献



PubMed の  
商用版

## SciFinder の文献データベース

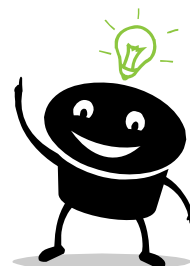
データベース名	CPlus	MEDLINE (≒ PubMed)
分野	化学および周辺分野の文献	生物医学分野の文献
製作者	CAS	米国国立医学図書館 (NLM)
収録件数	4,300 万件以上	2,500 万件以上
収録年代	1808 年～	1946 年～
特長	<ul style="list-style-type: none"> <li>・世界中の論文・<b>特許</b>情報を収録</li> <li>・<b>CAS 登録番号</b>による化学物質索引を付与</li> </ul>	<ul style="list-style-type: none"> <li>・世界中の論文情報を収録 (<b>PubMed</b> に収録されている情報)</li> <li>・UNII コードによる化学物質索引を付与 (CAS 登録番号の情報もあれば収録)</li> </ul>

## キーワードからの文献検索

- SciFinder では 2 つのデータベースを同時に検索します。



**網羅的な検索が可能！**



# データベース別のヒット件数比較

- 例：ジカウイルス感染症  
(zika virus infection)

Research Topic "zika virus infection" > references (530)

530 件ヒット

REFERENCES

Get Substances | Get Reactions | Get Related Citations | Tools

Analyze | Refine | Categorize

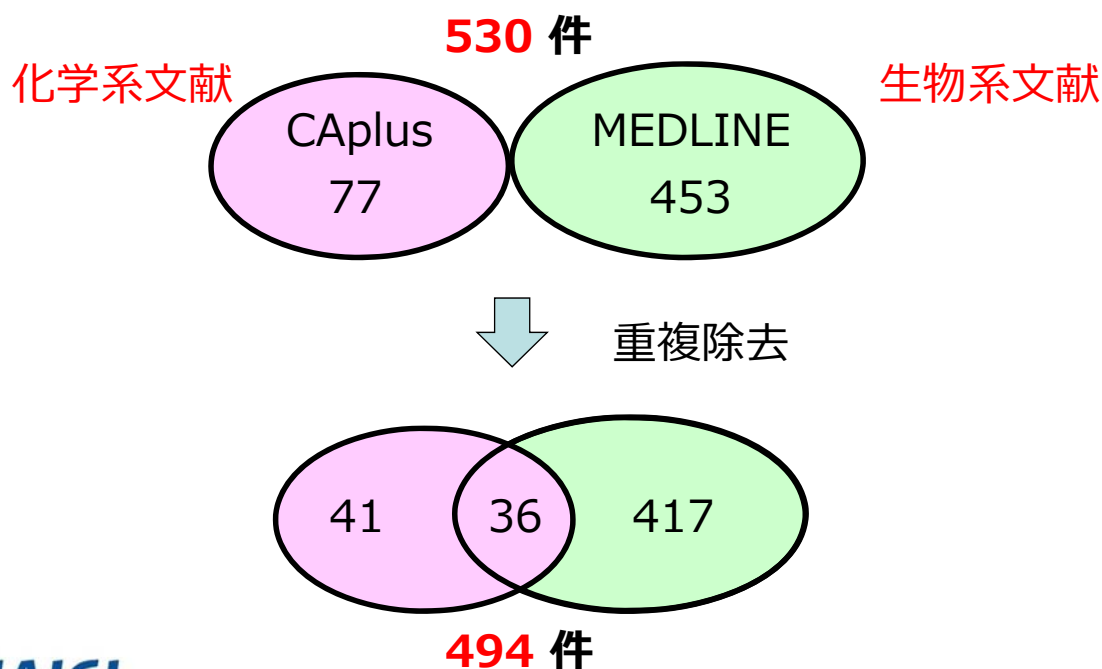
Sort by: Accession Number

0 of 530 References Selected

1. **Neural stem cells attacked by Zika virus**  
 Quick View | Other Sources  
 By Nguyen, Ha Nam; Qian, Xuyu; Song, Hongjun; Ming, Guo-li  
 From Cell Research (2016), Ahead of Print. | Language: English, Database: CAPLUS

**Zika virus (ZIKV)** is a pos. single-stranded DNA flavivirus and is primarily species mosquito. **ZIKV** was first discovered in 1947 in Africa and, per symptomatic cases, study of **Zika virus disease** had been largely neglect America, esp. in Brazil, and the coincidental increase in cases of microce (WHO) to declare a public health emergency of international concern'. increased efforts by scientists in an att...

# ヒット件数の内訳



## 主なヒットの違い

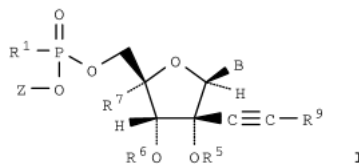
- CAplus は、**特許も収録しているため**
- CAplus と MEDLINE で、**収録対象外の雑誌があるため**
- **収録のタイムラグ**

## CAplus のみでヒット : 特許

### 2. Preparation of 2'-ethynyl nucleotide derivatives for treatment of viral infections

By: Anandan, Sampath-Kumar; Aulakh, Virender Singh; Fenaux, Martijn; Lin, Xiaodong; Mao, Liang; Saunders, Oliver; Sweeney, Zachary Kevin; Yokokawa, Fumiaki; Zhong, Weidong  
Assignee: Novartis AG, Switz.

2'-Branched nucleosides I, wherein B, is pyrimidine nucleobase, R<sup>1</sup> is substituted amino acid; is Z is H, substituted Ph; R<sup>2</sup> and R<sup>3</sup> are independently H, alkyl; R<sup>4</sup> R<sup>5</sup> together form a five member cyclic carbonate; R<sup>7</sup> is H, N<sub>3</sub>; R<sup>8</sup> is H, F, Cl, Me; R<sup>9</sup> is H, halogen; were prepd. and are useful for the treatment or prevention of viral infections, particularly dengue virus, yellow fever virus, West Nile virus, Japanese encephalitis virus, tick-borne encephalitis virus, Kunjin virus, Murray Valley encephalitis, St Louis encephalitis, Omsk hemorrhagic fever virus, bovine viral diarrhea virus, Zika virus and Hepatitis C virus. Thus, nucleoside II was prepd. and tested in vitro as antiviral agent.



#### Patent Information

Patent No.	Kind	Language	Date	Application No.	Date
WO 2014033617	A1		Mar 6, 2014	WO 2013-IB56898	Aug 27, 2013
US 20140065101	A1	English	Mar 6, 2014	US 2013-14011500	Aug 27, 2013
EP 2890704	A1		Jul 8, 2015	EP 2013-785621	Aug 27, 2013
AR 92390	A1		Apr 22, 2015	AR 2013-103089	Aug 30, 2013
US 20150232501	A1	English	Aug 20, 2015	US 2015-14421249	Feb 12, 2015

#### Priority Application

US 2012-61695727	P	Aug
WO 2013-CN73443	A	Mar
WO 2013-IB56898	W	Aug

CAplus には、世界中の特許情報が収録されているが、MEDLINE は特許を収録していない

**A Zika virus-associated microcephaly case with background exposure to STORCH agents**

By: Hanaoka, Mauro Mitsuru; Kanas, Alexandre Fligelman; Braconi, Carla Torres; Mendes, Erica Araujo; Santos, Robert Andreato; Ferreira, Luis Carlos de Souza; Cunha, Marielton dos Passos; Braga, Patricia Beltrao; Dias, Joao Leonardo Mendonca; Polonio, Carolina Manganeli; Andrade, David Anibal Garrido; Longo de Freitas, Carla; Rossato, Cristiano; Brandao, Wesley Nogueira; Peron, Jean Pierre Schatzmann; Gomes de Amorim Filho, Antonio; Andrade, Joelma Queiroz; Francisco, Rossana Pulcineli Vieira; Kok, Fernando; Suzuki, Lisa; Leite, Claudia da Costa; Lucato, Leandro Tavares; Sall, Amadou Alpha; Zanotto, Paolo Marinho de Andrade

We present a case of microcephaly assocd. with Zika virus (ZIKV) in a chronol., multimodal imaging approach, illustrating the hallmarks of this disease on intrauterine morphol. ultrasound, transfontanelar ultrasound, computed tomog. (CT) and magnetic resonance imaging (MRI). We also detd. the serol. e immunol. status of the mother and newborn. Noticeably, there was evidence for maternal infection by ZIKV, cytomegalovirus (CMV), herpes simplex virus (HSV), dengue virus (DENV) and Toxoplasma gondii, which indicates a possible role of previous exposures to STORCH agents and possibly comorbidities in the severe fetal congenital manifestation.

**Citations**

Abbasi, M; J Infect Dis 2003, 188, 608  
 Amorim, J; J Virol Methods 2010, 167, 186  
 Awasthi, A; Nat Immunol 2007, 8, 1380

MEDLINE 収録対象外の雑誌

SOURCE	COMPANY/ORGANIZATION	PUBLISHER
bioRxiv, Microbiology Pages52340/1-52340/28 Preprint 2016 CODEN:BMIBQ DOI:10.1101/052340	Department of Radiology, Institute of Radiology, Hospital das Clinicas University of Sao Paulo Sao Paulo, Brazil	Cold Spring Harbor Laboratory Press
		LANGUAGE
		English



**385. Complete coding sequence of zika virus from a French polynesia outbreak in 2013**

Baronti Cecile; Piorowski Geraldine; Charrel Remi N; de Lamballerie Xavier; Boubis Laetitia; Leparc-Goffart Isabelle

Zika virus is an arthropod-borne Flavivirus member of the Spondweni serocomplex, transmitted by Aedes mosquitoes. We report here the complete coding sequence of a Zika virus strain belonging to the Asian lineage, isolated from an infected patient returning from French Polynesia, an epidemic area in 2013/2014.

SOURCE	COMPANY/ORGANIZATION	LANGUAGE
Genome announcements Volume2 Issue3 Journal; Article; (JOURNAL ARTICLE) 2014 E-ISSN:2169-8287 Journal Code:101595808 United States	French National Reference Centre for Arboviruses, IRBA, Marseille, France	English
	EMAIL	
	cecile.baronti@univ-amu.fr	

CAplus 収録対象外の雑誌

## 9. Zika Virus and Zika Viral Disease

Zhang Shuo; Li Dexin

Since Zika virus (ZIKV) has firstly been isolated in 1947, Uganda, outbreaks of Zika fever have been reported in many areas such as in Africa, Southeast Asia and America. Imported cases in China also have been reported. Zika virus belongs to the family Flaviviridae, genus Flavivirus, and include Africa subtype and Asia subtype. It is a mosquito-borne virus primarily transmitted by Aedes aegypti mosquitoes. Sexual transmission, Blood transmission and mother-to-fetus transmission were also reported. Zika virus can go through blood-brain barrier and infect central nervous system. Symptoms are generally mild and self-limited, but recent evidence suggests a possible association between maternal Zika virus infection and adverse fetal outcomes, such as congenital microcephaly, as well as a possible association with Guillain-Barre syndrome. Laboratorial Diagnosis includes nucleic acid detection, Serological test, and isolation of virus. Currently, no vaccine or medication exists to prevent or treat Zika virus infection. Preventive measures against Zika virus infection should be taken through prevention of mosquito bites and surveillance in epidemic area.

## Indexing

## Concepts

Check Tags:

Aedes: PH, physiology Animals Insect Vectors: PH, physiology <b>Zika Virus: PH, physiology</b>	Aedes: VI, virology Humans Insect Vectors: VI, virology Zika Virus: GE, genetics <b>Zika Virus Infection: TM,</b> transmission <b>Zika Virus Infection: VI,</b> virology
--	---

## SOURCE

*Bing du xue bao = Chinese journal of virology / [bian ji, Bing du xue bao bian ji wei yuan hui]*  
Volume32  
Issue1  
Pages121-7

(ENGLISH ABSTRACT);  
Journal; Article; (JOURNAL  
ARTICLE); (RESEARCH  
SUPPORT, NON-U.S. GOV'T);  
General Review; (REVIEW)  
2016  
ISSN:1000-8721  
Journal Code:8803009  
China

CAplus で収録されて  
いる雑誌だが、まだ  
収録されていない

2017099128

## 検索後の機能 ~ 重複除去 ~

- CAplus と MEDLINE で、同じ出典の重複レコードを除去できます。

CAS Solutions

SCIFINDER<sup>®</sup>  
A CAS SOLUTION

Explore Saved Searches SciPlanner

36 duplicates were removed. To remove duplicates automatically, visit [Preferences](#).

Research Topic "zika virus infection" > references (530) > remove 36 references (494)

REFERENCES Get Substances Get Reactions Get Related Citations Tools

Analyze Refine Categorize Sort by: Accession Number

Analyze by: 0 of 494 References Selected

Tools  
Remove Duplicates  
Combine Answer Sets

## 検索後の機能 ～ 解析・絞り込み ～

- **解析や絞り込み**により，データベースごとあるいは，資料種類（雑誌や特許）ごとに回答を確認できます。

データベースごとに解析

REFERENCES

Get Substances Get Reactions Get Related Citations Tools

Analyze Refine Categorize

Sort by: Accession Number

0 of 494 References Selected

Analyze by: Database

MEDLINE 417

CAPLUS 77

Show More

1. **Neural stem cells attacked by Zika virus**  
 Quick View Other Sources  
 By Nguyen, Ha Nam; Qian, Xuyu; Song, Hongjun; Ming, Guo-li  
 From Cell Research (2016), 26(7), 753-754. | Language: English, Database: CAPLUS  
**Zika virus (ZIKV)** is a pos. single-stranded DNA flavivirus and is primarily species mosquito. **ZIKV** was first discovered in 1947 in Africa and, perth symptomatic cases, study of **Zika virus disease** had been largely neglect America, esp. in Brazil, and the coincidental increase in cases of microcep (WHO) to declare a public health emergency of international concern<sup>1</sup>. increased efforts by scientists in an att...

2. **Instrument-Free Point-of-Care Molecular Detection of Zika Virus**  
 Quick View Other Sources  
 By Song, Jinzhao; Mauk, Michael G.; Hackett, Brent A.; Cherry, Sara; Bau, Haim H.; Liu, Ch  
 From Analytical Chemistry (Washington, DC, United States) (2016), Ahead of Print. | Lang

## 検索後の機能 ～ 被引用文献 ～

- **被引用文献数**の多い順に並べ替えて，効率よく文献を確認できます。

Accession Number  
Author Name  
Citing References  
Publication Year  
Title

Sort by: Citing References

0 of 351 References Selected

1. **Zika virus outbreak on Yap Island, Federated States of Micronesia**  
 Quick View Other Sources  
 By Duffy, Mark R.; Chen, Tai-Ho; Hancock, W. Thane; Powers, Ann M.; Kool, Jacob L.; Lanciotti, Robert S.; Pretrick, Moses; Marfel, Maria; Holsbauer, Stacey; Dubray, Christine; et al  
 From New England Journal of Medicine (2009), 360(24), 2536-2543. | Language: English, Database: CAPLUS

2. **Genetic and serologic properties of Zika virus associated with an epidemic, Yap State, Micronesia, 2007**  
 Quick View Other Sources  
 By Lanciotti, Robert S.; Kosoy, Olga L.; Laven, Janeen J.; Velez, Jason O.; Lambert, Amy J.; Johnson, Alison J.; Stanfield, Stephanie M.; Duffy, Mark R.  
 From Emerging Infectious Diseases (2008), 14(8), 1232-1239. | Language: English, Database: CAPLUS

3. **Zika virus outside Africa**  
 Quick View Other Sources  
 By Hayes Edward B  
 From Emerging infectious diseases (2009), 15(9), 1347-50. | Language: English, Database: MEDLINE



## デモンストレーション 1

- Biosimilar (バイオ後続品) に関する雑誌論文検索

## 物質からの文献検索

- SciFinder には、世界最大の物質のデータベースが搭載されています。

データベース名	REGISTRY
収録物質	有機化合物, 無機化合物, タンパク質, 核酸, ポリマー, 配位化合物, 有機金属化合物, 金属, 合金, 鉱物, 元素
製作者	CAS
収録件数	1億 8,100万件以上
収録年代	1800年初頭～
特長	<ul style="list-style-type: none"> <li>• 世界最大の化学物質のデータベース</li> <li>• <b>CAS 登録番号</b>が付与された化学物質を収録</li> </ul>

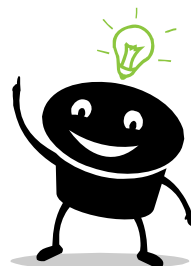
抗体医薬品や  
酵素も収録

## 物質からの文献検索

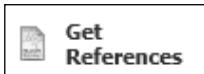
- SciFinder には、世界最大の物質のデータベースが搭載できます。



**物質の検索に強い！**



## 物質に関する文献の検索

- 文献の主題にかかわる重要な物質は、以下のいずれかで索引される
  - CPlus : CAS 登録番号
  - MEDLINE : CAS 登録番号 または 物質名称
- CAS 登録番号で索引されているレコードは、REGISTRY からの  で簡単に検索できる

# CAplus のレコード

**REGISTRY** Get References Get Commercial Sources

CAS Registry Number **946414-94-4**

Nivolumab  
 Editor Note  
 A fully human IgG4 antibody blocking the programmed cell death receptor

**Other Names**  
 BMS 936558  
 MDX 1106  
 ONO 4538  
 Opdivo

**Protein Sequence**  
 Sequence Length: 1308, 440, 440, 214, 214  
 multichain; modified (modifications unspecified)

**CAplus** Search progress of PD-1/PD-L1 antibodies  
 by [Author], Shi, Shu-mei; Chen, Xiu-hua

A review with 22 ref. is given on clin. research progress of PD-1/PD-L1 antibodies in the patients who complete surgical excision, chemotherapy, radiotherapy, and targeted therapy. The review summarizes the clinical research progress of PD-1/PD-L1 antibodies against immune checkpoints have achieved very good results in clinical practice. This review summarizes as well as the application of PD-1 antibody in tumor therapy.

**Substances**

**946414-94-4 Nivolumab** 🔍  
 1036730-42-3 Pembrolizumab 🔍  
 1374853-91-4 Pembrolizumab 🔍

CAS 登録番号で索引



# MEDLINE のレコード

**REGISTRY** Get References Get Reactions

CAS Registry Number **33069-62-4**

**C<sub>27</sub>H<sub>31</sub>N O<sub>4</sub>**  
 Benzenepropanoic acid, β-(benzoylamino)-α-hydroxy-, (2aR,4S,4aR,9S,11S,12S,12aR,12bS)-6,12b-bis(acetyloxy)-12-(benzyloxy)-2a,3,4a,5,6,9,10,11,12,12a,12b-dodecahydro-4,11-dihydroxy-4a,8,13,14-tetramethyl-5-oxo-7,11-methano-1H-cyclodeca[3,4]benz[1,2-b]oxet-5-yl ester, (αR,βS)-

**Other Names**  
 Paclitaxel  
 Taxol

**MEDLINE** Problems of Nab-Paclitaxel Therapies  
 by [Author], Takeshi; Okayama Tetsuya; Dohi Osamu; Yoshida Uchiyama Kazuhiko; Handa Osamu; Takagi Tomohisa; Yasuda Hiroaki; Sak

Nanoparticle albumin-bound paclitaxel(nab-PTX)was approved for the Japan. Its safety and efficacy should be validated in clinical practice.

**Substances**

Registry Numbers

**33069-62-4 (Paclitaxel)** 🔍

CAS 登録番号で索引

※ REGISTRY からの Get References でヒットしない例

**SUBSTANCE DETAIL** Get References Get Commercial Sources

Return

CAS Registry Number 946414-94-4

**Nivolumab**  
 Editor Note  
 A fully human IgG4 antibody blocking the programmed cell death receptor

**Other Names**  
 Opdivo

**1. Melanoma-specific MHC-II expression represents predicts response to anti-PD-1/PD-L1 therapy**  
 Johnson Douglas B; Opalenik Susan R; Feld Emily; Lovly Christine M; Puzanov I Sanchez Violeta; Johnson Adam S; Greenplate Allison R; Sanders Melinda E; Iris

**Substances**

Chemical Names

Antibodies, Monoclonal	Antibodies, Monoclonal
MPDL3280A	Antibodies, Humanized
RNA, Messenger	Programmed Cell Death Receptor
	<b>nivolumab</b>

物質名称で索引

## デモンストレーション 2

- Kalydeco (囊胞性線維症治療薬の商品名) に関する文献検索

### (参考) 物質名のキーワード検索



キーワード検索

Kalydeco → **MEDLINE** 22件

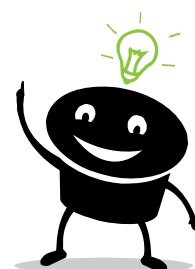
ivacaftor → **MEDLINE** 263件

- 選定するキーワードにより回答が異なる
- レコード全体を対象にした検索になる

## まとめ

- SciFinder は, 2つの文献データベースを搭載! 網羅的に検索できます.
- 物質関連の文献も的確に検索できます.

**生物系の研究者も**  
**SciFinder をご活用ください**



## 参考資料

- e-ラーニング (自習用教材)  
<http://www.jaici.or.jp/SCIFINDER/elearning/index.html>
  - キーワード検索の活用
  - 生物活性情報の調べ方