

BIOSIS ファイルで医薬文献検索



本日の内容

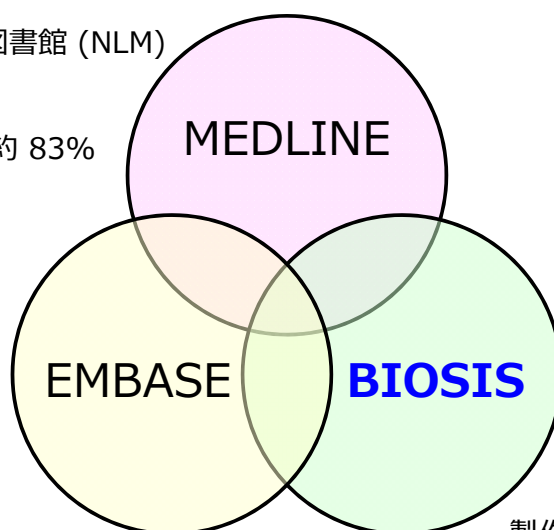
- BIOSIS とは
- 索引情報
- 化学物質の索引
- 検索方針
- デモンストレーション

BIOSIS ファイルとは

- **ライフサイエンス全般**を網羅的に収録している文献データベース
 - 収録件数が多い。収録分野が広い。
 - 会議録情報を多数収録
 - CAS 登録番号が全期間に付与されている
 - 詳細な索引が付与されている

BIOSIS ファイルとは

製作者：米国国立医学図書館 (NLM)
 収録件数：2378 万
 収録期間：1946 年～
 統制語索引の収録率：約 83%
 抄録の収録率：約 60%

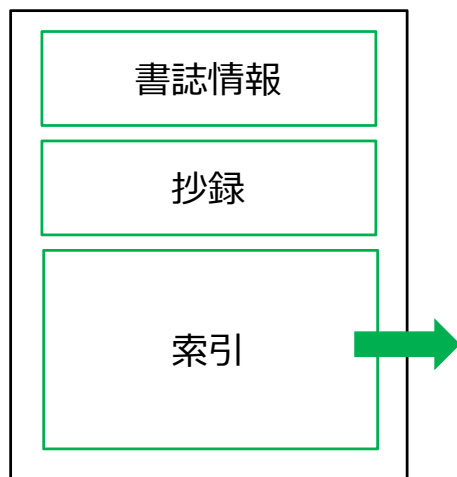


製作者：Elsevier B.V.
 収録件数：2885 万
 収録期間：1947 年～
 統制語索引の収録率：約 100%
 抄録の収録率：約 64%

製作者：Thomson Reuters
 収録件数：2363 万
 収録期間：1926 年～
 統制語索引の収録率：約 100%
 抄録の収録率：約 60%

BIOSIS ファイルとは

• レコード構成



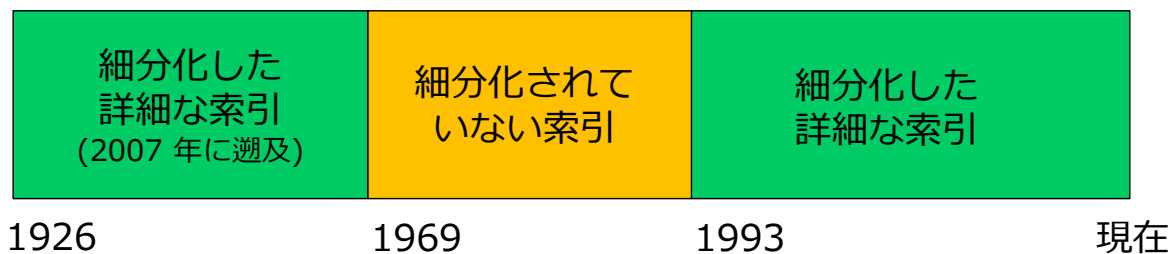
さまざまな項目に細分化された
詳細な索引情報を収録

今回は、医薬品（化学物質）に
関する文献検索を中心に
ご紹介します



索引情報

• 索引情報の年代変遷



– 年代により索引の詳しさが異なる。

1926-1968,1993- のレコード例

レコード番号	AN 2014:500038 BIOSIS
資料番号	DN PREV201400500038
標題	TI Unaltered Striatal Dopamine Release Levels in Young Parkin Knockout, Pink1 Knockout, DJ-1 Knockout and LRRK2 R1441G Transgenic Mice.
著者	AU Sanchez, Gonzalo; Varaschin, Rafael K.; Bueeler, Hansruedi; Marcogliese, Paul C.; Park, David S.; Trudeau, Louis-Eric [Reprint Author]
著者所属機関	CS Univ Montreal, Fac Med, Cent Nervous Syst Res Grp, Dept Pharmacol, Montreal, PQ H3C 3J7, Canada louis-eric.trudeau@umontreal.ca
収録源	SO PLoS One, (APR 14 2014) Vol. 9, No. 4, pp. Article No.: e94826. http://ukpmc.ac.uk/journals/1217/. ISSN: 1932-6203. E-ISSN: 1932-6203.
デジタルオブジェクト識別子	DOI 10.1371/journal.pone.0094826
資料種類	DT Article
原語	LA English
入力日	ED Entered STN: 2 Jul 2014 Last Updated on STN: 2 Jul 2014
抄録	AB Parkinson's disease (PD) is one of the most prevalent neurodegenerative brain diseases; it is accompanied by extensive loss of dopamine (DA) neurons of the substantia nigra that project to the putamen, leading to impaired motor functions. Several genes have been associated with :
概念コード	CC Cytology - Animal 02506 Genetics - General 03502 Genetics - Animal 03506 Biochemistry studies - Proteins, peptides and amino acids 10064 Nervous system - Physiology and biochemistry 20504 Nervous system - Pathology 20506

書誌情報

抄録

索引

JAICI
化学情報協会

1926-1968,1993- のレコード例

主要概念	IT Major Concepts Molecular Genetics (Biochemistry and Molecular Biophysics); Nervous System (Neural Coordination)
生物部位, 構造, 器官	IT Parts, Structures, & Systems of Organisms putamen: nervous system; striatum: nervous system; substantia nigra: nervous system; dopamine neuron: nervous system; axon terminal: nervous system
病名	IT Diseases Parkinson's disease: nervous system disease
化学, 生化学物質	IT Chemicals & Biochemicals dopamine
手法・機器	IT Methods & Equipment fast scan cyclic voltammetry: laboratory techniques
その他の索引語	IT Miscellaneous Descriptors motor function; molecular dysfunction
生物系統分類コード	ORGN Classifier Muridae 86375
スーパータクサ	Super Taxa Rodentia; Mammalia; Vertebrata; Chordata; Animalia
生物名	Organism Name mouse (common): transgenic, female, male
タクサノート	Taxa Notes Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Rodents, Vertebrates
CAS 登録番号 (化学物質名)	RN 51-61-6 (dopamine)
遺伝子名	GEN mouse DJ-1 gene (Muridae): mutation; mouse LRRK2 gene (Muridae): mutation; mouse Parkin gene (Muridae): mutation; mouse Pink1 gene (Muridae): mutation

IT フィールドは索引項目別にフィールドが分けられている

索引

生物索引

物質索引

JAICI
化学情報協会

1969-1992 のレコード例

レコード番号	AN 1985:317488 BIOSIS	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin-bottom: 5px;">書誌情報</div> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin-bottom: 5px;">抄録</div> <div style="border: 1px solid black; padding: 5px; width: fit-content;">索引</div>
資料番号	DN PREV198579097484; BA79:97484	
標題	TI CAUDATE NUCLEUS AND PROGRAMMING BEHAVIOR IN CATS ROLE OF DOPAMINE IN SWITCHING MOTOR PATTERNS.	
著者	AU JASPERS R [Reprint author]; SCHWARZ M; SONTAG K H; COOLS A R	
著者所属機関	CS RESEARCH UNIT PSYCHONEUROPHARMACOLOGY, DEP PHARMACOLOGY, UNIV NIJMEGEN, PO BOX 9101, 6500 HB NIJMEGEN, THE NETHERLANDS	
収録源	SO Behavioural Brain Research, (1984) Vol. 14, No. 1, pp. 17-28. CODEN: BBREDI. ISSN: 0166-4328.	
資料種類	DT Article	
ファイルセグメント	FS BA	
原語	LA ENGLISH	
抄録	AB Cats were trained to walk on a specially designed treadmill: the cats were able to collect food pellets by switching motor patterns with or without the help of exteroceptive stimuli inherent to the treadmill. To study involvement of the caudate nucleus in switching motor patterns cats received intracaudate bilateral injections of haloperidol. In addition, in a final series of experiments, EMG recordings of 2 antagonistic :	
概念コード	CC Behavioral biology - Animal behavior 07003 Behavioral biology - Conditioning 07005 Biochemistry studies - General 10060 Biochemistry studies - Proteins, peptides and amino acids 10064 Biophysics - Methods and techniques 10504 Physiology - Instrumentation 12004 Movement 12100 Pathology - Comparative 12503 Metabolism - Proteins, peptides and amino acids 13012 :	

1969-1992 のレコード例

主要概念	IT Major Concepts Behavior; Metabolism: Muscular System (Movement and Support); Nervous System (Neural Coordination); Neurology (Human Medicine, Medical Sciences); Pathology; Pharmacology	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin-bottom: 5px;">索引</div>
その他の索引語	IT Miscellaneous Descriptors HUMAN HALOPERIDOL PARKINSONS DISEASE EXTEROCEPTIVE STIMULI ELECTROMYOGRAM	
生物系統分類コード	ORGN Classifier Felidae 85770	
スーパータクサ	Super Taxa Carnivora; Mammalia; Vertebrata; Chordata; Animalia	
タクサノート	Taxa Notes Animals, Carnivores, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals, Vertebrates	
生物系統分類コード	ORGN Classifier Hominidae 86215	
スーパータクサ	Super Taxa Primates; Mammalia; Vertebrata; Chordata; Animalia	
タクサノート	Taxa Notes Animals, Chordates, Humans, Mammals, Primates, Vertebrates	
CAS 登録番号 (化学物質名)	RN 51-61-6 (DOPAMINE) 52-86-8 (HALOPERIDOL)	

索引項目が細分化されていない

- ・ IT Major Concepts (主要概念)
- ・ IT Miscellaneous Descriptors (その他の索引語)

Organism Name (生物名) は収録されていない



各索引情報の収録期間

	1926	1969	1993	現在
概念コード： Concept Code	広義概念を表すコードと英語名 (全 571 コード)			
主題概念： Major Concepts	文献の主題を表す索引語 (全 168 語, 平均 1~4 語/レコード)			
CAS 登録番号 (化学物質名)	主題に関係する化学物質			
タクサノート： Taxa Notes	スーパータクサの広義概念である一般的名称 (全 73 語)			
スーパータクサ： Super Taxa	生物系統分類階級 (生物名の広義概念語) (目・綱, 門, 界)			
生物系統分類コード： Classifier	生物分類を表すコードおよび生物名の広義概念語 (科) (700 以上)			
その他の索引語： Miscellaneous Descriptors		索引に役立つような追加索引語		



各索引情報の収録期間 (つづき)

	1926	1969	1993	現在
時代, 期間: Time				
地理的用語: Geographic Terms				
化学, 生化学物質: Chemicals & Biochemicals				
生物名: Organism Name				
病名: Diseases				
生物部位, 構造, 器官系: Parts, Structures, & Systems of Organisms				
配列データ: Sequence data				
配列データベースのレコード番号				
手法, 機器: Methods & Equipment				
遺伝子名 GEN				

化学物質の索引 - RN フィールド

• CAS 登録番号 (化学物質名)

- RN フィールドに、主題に関する化学物質の **CAS 登録番号**と、文献中に記載されている **化学物質名**を () 内に収録.

RN 56-75-7 (chloramphenicol)
1406-05-9 (penicillin)
60-54-8 (tetracyclines)
738-70-5 (TRIMETHOPRIM)

基本索引 (/BI またはなし)
索引 (/IT) に含まれる

化学物質の索引 - IT フィールド

• 化学, 生化学物質

- **化学物質名** (一般名, 商品名など), **医薬品グループ**の情報などを収録

IT Chemicals & Biochemicals
chloramphenicol: antibacterial-drug; macrolides: anti (S) rial;
penicillin-binding proteins; penicillin: antibacterial-drug;
tetracyclines: antibacterial; trimethoprim/sulfomethoxazole:
:

基本索引 (/BI またはなし)
索引 (/IT) に含まれる
~ (L) IT.CB/FA で限定可能

索引語: Modifier
Modifier は索引語を説明する語

化学物質の索引 - IT フィールド

• その他の索引語

– 検索に役立つような**追加索引**を収録.

IT Miscellaneous Descriptors

ABSTRACT INFLUENZA A VIRUS HUMAN AMANTADINE RIMANTADINE R61837
POST-EXPOSURE PROPHYLAXIS VIRAL SUSCEPTIBILITY ISOLATION

(L)

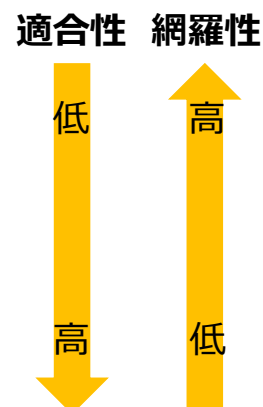
基本索引 (/BI またはなし)
索引 (/IT) に含まれる
～ (L) IT.MI/FA で限定可能

検索方針



ある医薬品に関して…

1. **網羅的**な文献検索
2. **主題に関連**する文献を検索
3. **適合性の高い**文献を検索



1. 網羅的な文献検索

● 検索方針：

全年代対象

– 基本索引 (/BI またはなし) で検索

- 適切な**概念コード**があれば検索に加える
- 化学物質は REGISTRY ファイルで調べ、**CAS 登録番号**や**化学物質名称**を抽出し、利用するとよい。

書誌情報 (標題)

抄録

索引

1. 網羅的な文献検索

```
=> FILE REGISTRY
=> S ... (L1)

=> SEL CHEM L1 1-#
=> D SEL
E1 ...
:
E# ...
```

```
=> FILE BIOSIS

=> S E1-E# AND (キーワード
OR 概念コード/CC) (L2)
```

CAS 登録番号と
化学物質名称を抽出

2. 主題に関連する文献を検索

● 検索方針：

全年代対象

– 標題 (/TI), 索引 (/IT) で検索

- 化学物質は REGISTRY ファイルで調べ、
CAS 登録番号や化学物質名称を抽出し検索
- または -
- REGISTRY ファイルで調べた L 番号を
BIOSIS ファイルにクロスオーバー
(CAS 登録番号のみ検索)

書誌情報 (標題)

抄録

索引

2. 主題に関連する文献を検索

```
=> FILE REGISTRY
=> S ... (L1)

=> SEL CHEM L1 1-#
=> D SEL
E1 ...
:
E# ...
```

```
=> FILE BIOSIS

=> S E1-E#/TI, IT AND
(キーワード/TI, IT OR
概念コード/CC) (L3)

=> S L1 AND (キーワード/TI, IT
OR 概念コード/CC) (L4)
```

3. 適合性の高い文献を検索

● 検索方針：

– 化学，生化学物質 (IT.CB/FA) 中で，
化学物質名と Modifier (説明語) を
組み合わせて検索

1969-1992
検索できない

– その他の索引語 (IT.MI/FA) で補足

1969-1992
を補足

書誌情報 (標題)

抄録

索引 (限定)

3. 適合性の高い文献を検索

```
=> FILE REGISTRY
=> S ... (L1)

=> SEL CHEM L1 1-#
=> D SEL
E1 ...
:
E# ...
```

```
=> FILE BIOSIS

=> S (E1-E#) (S) キーワード
(L) IT. CB/FA (L5)

=> S (E1-E#) (L) キーワード
(L) IT. MI/FA RAN=1969, 1992
(L6)

=> S L5 OR L6
```

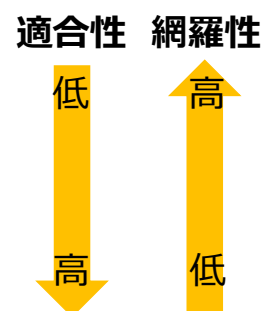
デモンストレーション



- フィナステリド (finasteride) の副作用について述べられている文献を検索する。

(準備) 予備検索

1. **網羅的**な文献検索
2. **主題に関連する**文献を検索
3. **適合性の高い**文献を検索



まとめ

- BIOSIS ファイルは、**ライフサイエンス全般**を網羅的に収録している文献データベース
- **詳細な索引**を付与している
- 利用するフィールドを変えて、**網羅的**な検索や**適合性の高い**検索ができる



参考資料

- http://www.jaici.or.jp/stn/stn_doc_01.html#b
 - STN バイオサイエンスデータベース
セミナー
 - BIOSIS ファイル
 - 検索事例 (ライフサイエンス)



【準備 予備検索】 索引の状況や、概念コード (CC) を確認する

=> FILE BIOSIS ← BIOSIS ファイルに入る

=> SET PLU ON; SET ABBE ON; SET SPE ON
SET COMMAND COMPLETED ← 複数形, 略語, 英米の綴り違いなどを
含めて検索する設定

:
=> S FINASTERIDE(S) (ADVERSE OR SIDE) (S) (EFFECT? OR EXPERI?)/TI ← 標題中に限定して検索
L1 6 FINASTERIDE(S) (ADVERSE OR SIDE) (S) (EFFECT? OR EXPERI?)/TI

=> D TI 1-6 ← 標題を表示

L1 ANSWER 1 OF 6 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
TI Decreased Alcohol Consumption Among Former Male Users of **Finasteride**
with Persistent Sexual **Side Effects**: A Preliminary Report.

L1 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
TI A pilot study on the sexual **side effects** of **finasteride** as related
to hand preference for men undergoing treatment of male pattern baldness.

L1 ANSWER 3 OF 6 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
TI Incidence and severity of sexual **adverse experiences** in **finasteride**
and placebo-treated men with benign prostatic hyperplasia.
:

=> D IND 1 2 ← 興味があるレコードの索引情報を表示

L1 ANSWER 1 OF 6 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
CC Biochemistry studies - Sterols and steroids 10067
Pathology - Diagnostic 12504
Pathology - Therapy 12512
Integumentary system - Pathology 18506
Nervous system - Physiology and biochemistry 20504
Pharmacology - General 22002
Pharmacology - Clinical pharmacology 22005
Pharmacology - Endocrine system 22016
Toxicology - General and methods 22501
Toxicology - Pharmacology 22504

IT Major Concepts
Pharmacology; **Toxicology**; Dermatology (Human Medicine, Medical
Sciences)

IT Parts, Structures, & Systems of Organisms
central nervous system: nervous system

IT Diseases
hair loss: integumentary system disease, drug-induced, diagnosis
Alopecia (MeSH)

IT Chemicals & Biochemicals
finasteride: enzyme inhibitor-drug, androgen-drug, pharmacodynamics,
efficacy, adverse effects

IT Methods & Equipment
standardized interview: clinical techniques, diagnostic techniques

IT Miscellaneous Descriptors
alcohol consumption; sexual function

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human (common): adult, male
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 98319-26-7 (finasteride)

概念コード (CC) は、広義概念を表すコード。英
語名と共に収録されている。

オンラインで EXPAND して確認できる
(=> E 225/CC)

一覧は「BIOSIS ファイル」テキストの
APPENDIX 参照
<http://www.jaici.or.jp/stn/pdf/ref-biosis.pdf>

L1 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN

CC Biochemistry studies - Sterols and steroids 10067
Pathology - Therapy 12512
Urinary system - Pathology 15506
Integumentary system - Pathology 18506
Pharmacology - General 22002
Pharmacology - Clinical pharmacology 22005
Pharmacology - Urinary system 22032
Toxicology - General and methods 22501
Toxicology - Pharmacology 22504

IT Major Concepts
Pharmacology; Toxicology; Dermatology (Human Medicine, Medical Sciences); Urology (Human Medicine, Medical Sciences)

IT Diseases
male pattern baldness: integumentary system disease, drug therapy

IT Chemicals & Biochemicals
dihydrotestosterone; finasteride: enzyme inhibitor-drug, antiprosthetic hypertrophy-drug, dosage, adverse effects

IT Methods & Equipment
International Index of Erectile Function [IIEF]: clinical techniques, diagnostic techniques

IT Miscellaneous Descriptors
erectile function; hand preference; sexual arousal; cognitive style; orgasmic function; intercourse satisfaction; self-reported sexual response; neuroendocrine psychosexual data

ORGN Classifier
Hominidae 86215
Super Taxa
Primates; Mammalia; Vertebrata; Chordata; Animalia
Organism Name
human (common): adult, Romanian, male
Taxa Notes
Animals, Chordates, Humans, Mammals, Primates, Vertebrates

RN 521-18-6 (dihydrotestosterone)
98319-26-7 (finasteride)

=> DEL HIS Y

← 資料と同じ L 番号で説明するため履歴を削除

【REGISTRY ファイルで化学物質を検索】SELECT CHEM で化学物質名称と CAS 登録番号を抽出する

=> FILE REGISTRY

← REGISTRY ファイルに入る

=> E FINASTERIDE/CN

← 完全名 (/CN) を EXPAND する

E1 1 FINASOL W/CN
E2 1 FINAST/CN
E3 1 --> FINASTERIDE/CN
E4 1 FINASTERIDE-Ω-AL/CN
E5 1 FINASTERIDE-1, 2-T2/CN
:

=> S E3

← 完全名 (/CN) を検索する

L1 1 FINASTERIDE/CN

=> D

← デフォルトの表示形式 (IDE 表示形式) で表示する

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2014 ACS on STN

RN 98319-26-7 REGISTRY

ED Entered STN: 29 Sep 1985

CN 1H-Indeno[5, 4-f]quinoline-7-carboxamide,
N-(1, 1-dimethylethyl)-2, 4a, 4b, 5, 6, 6a, 7, 8, 9, 9a, 9b, 10, 11, 11a-tetradecahydro-
4a, 6a-dimethyl-2-oxo-, (4aR, 4bS, 6aS, 7S, 9aS, 9bS, 11aR)- (CA INDEX NAME)

OTHER CA INDEX NAMES:

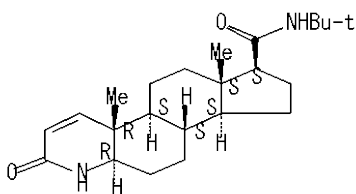
CN 4-Azaandrost-1-ene-17-carboxamide, N-(1, 1-dimethylethyl)-3-oxo-,
(5α, 17β)-

OTHER NAMES:

CN Chibro-Proscar

CN Finara
 CN Finast
 CN **Finasteride**
 CN Finastid
 CN Finax
 CN Fincar
 CN Finpecia
 CN Fistide
 CN MK 906
 CN N-(tert-Butyl)-3-oxo-4-aza-5 α -androst-1-ene-17-carboxamide
 CN Propecia
 CN Proscar
 CN Prosteride
 CN Prostide
 FS STEREOSEARCH
 MF C23 H36 N2 O2
 CI COM
 SR CA
 LC STN Files: ADISINSIGHT, ADISNEWS, ANABSTR, BIOSIS, BIOTECHNO, CA,
 CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CIN, CSNB, DDFU, DRUGU,
 EMBASE, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, PATDPASPC, PS,
 REAXYSFILE*, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
 (*File contains numerically searchable property data)
 Other Sources: WHO

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1870 REFERENCES IN FILE CA (1907 TO DATE)
 23 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1885 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=> SEL L1 1 CHEM
 E1 THROUGH E16 ASSIGNED

← SELECT CHEM で、化学物質名称と CAS 登録番号を抽出する

=> D SEL

← 抽出したタームを表示する

E1	1	CHIBRO-PROSCAR/BI
E2	1	FINARA/BI
E3	1	FINAST/BI
E4	1	FINASTERIDE/BI
E5	1	FINASTID/BI
E6	1	FINAX/BI
E7	1	FINCAR/BI
E8	1	FINPECIA/BI
E9	1	FISTIDE/BI
E10	1	MK 906/BI
E11	1	N-(TERT-BUTYL)-3-OXO-4-AZA-5 α -ANDROST-1-ENE-17-CARBOXA MIDE/BI
E12	1	PROPECIA/BI
E13	1	PROSCAR/BI
E14	1	PROSTERIDE/BI
E15	1	PROSTIDE/BI
E16	1	98319-26-7/BI

=> FILE BIOSIS

← BIOSIS ファイルに入る

1. 網羅的な文献検索 - 基本索引 (/BI またはなし) で検索

=> S E1-E16 AND (((ADVERSE OR SIDE) (2A) (EFFECT OR REACT? OR EVENT OR EXPERIEN?) OR TOXIC?) OR 225/CC)
L2 403 (CHIBRO-PROSCAR/BI OR FINARA/BI OR FINAST/BI OR FINASTERIDE/BI O...

=> D L2 ALL 3

← L2 に含まれていた回答の例

L2 ANSWER 3 OF 403 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
AN 2014:316825 BIOSIS Full-text
DN PREV201400316825

TI Lipid nanoparticles for topical and transdermal application for alopecia treatment: development, physicochemical characterization, and in vitro release and penetration studies.

AU Gomes, Maria Joao; Martins, Susana [Reprint Author]; Ferreira, Domingos; Segundo, Marcela A.; Reis, Salette

CS Univ Southern Denmark, Dept Phys Chem and Pharm, Campusvej 55, DK-5230 Odense M, Denmark
martins@sdu.dk; shreis@ff.up.pt

SO International Journal of Nanomedicine, (2014) Vol. 9, pp. 1231-1242.
<http://www.dovepress.com/international-journal-of-nanomedicine-journal>.
ISSN: 1178-2013. E-ISSN: 1178-2013.

DOI 10.2147/IJN.S45561

DT Article

LA English

ED Entered STN: 16 Apr 2014

Last Updated on STN: 16 Apr 2014

基本索引で検索すると、抄録も含めて網羅的に検索できる。しかし、ノイズも含まれる

書誌情報 (標題)

抄録

索引

AB Alopecia is a dermatological disorder, commonly known as hair loss, which affects up to half of the Caucasian male population by middle age, and almost all (95%) Caucasian men by old age. Considering that alopecia affects so many people and that there is currently no scientifically proven treatment with few **side effects**, new drug-delivery systems able to improve alopecia therapy are urgently required. With this purpose in mind, the present study aimed to develop lipid nanoparticles (nanostructured lipid carriers) with the ability to incorporate and deliver anti-alopecia active compounds (minoxidil and **finasteride**) into the dermis and hair follicles. Lipid nanoparticles, prepared by ultrasonication method, showed mean particle sizes around 200 nm, which is sufficient for reaching the dermis and hair follicles, and zeta potential values around -30 mV, which indicates good physical stability. Over 28 days of storage, no significant variations in these parameters were observed, which indicates that all nanoformulations are stable in storage over that period. Cryo-scanning electron microscope measurements showed that all the lipid nanoparticles exhibited a spherical shape and a smooth surface regardless of their composition. Differential scanning calorimetry studies allowed the determination of phase transition temperatures and confirmed the recrystallization of the lipid nanoparticles (recrystallization index between 11% and 86%). A high loading efficiency was achieved for **finasteride** (between 70% and 90%), while less than 30% was achieved for minoxidil nanoparticles, over 28 days. Controlled release assays in physiological conditions demonstrated that nanoparticles loaded with minoxidil yielded a prolonged release, as desired. Penetration assays through pig ear skin demonstrated that nanoparticles loaded with minoxidil and **finasteride** had low levels of penetration. These results suggest that the proposed novel formulation presents several good characteristics indicating their suitability for dermal delivery of anti-alopecia active compounds.

CC Biochemistry studies - Sterols and steroids 10067
Biophysics - Bioengineering 10511
Pathology - Therapy 12512
Integumentary system - Physiology and biochemistry 18504
Integumentary system - Pathology 18506
Sense organs - Physiology and biochemistry 20004
Pharmacology - General 22002
Pharmacology - Integumentary system, dental and oral biology 22020

IT Major Concepts
Pharmacology; Integumentary System (Chemical Coordination and Homeostasis); Biomaterials

IT Parts, Structures, & Systems of Organisms
hair follicle: integumentary system; dermis: integumentary system; ear skin: integumentary system, sensory system

IT Diseases
alopecia: integumentary system disease

Alopecia (MeSH)
 IT Chemicals & Biochemicals
 minoxidil: dermatological-drug; **finasteride**: dermatological-drug
 IT Methods & Equipment
 differential scanning calorimetry: laboratory techniques; lipid
 nanoparticle [nanostructured lipid carrier]: drug delivery device
 IT Miscellaneous Descriptors
 phase transition; physicochemical characterization; physical stability;
 transdermal application
 ORGN Classifier
 Suidae 85740
 Super Taxa
 Artiodactyla; Mammalia; Vertebrata; Chordata; Animalia
 Organism Name
 pig (common)
 Taxa Notes
 Animals, Artiodactyls, Chordates, Mammals, Nonhuman Vertebrates,
 Nonhuman Mammals, Vertebrates
 RN 38304-91-5 (minoxidil)
 98319-26-7 (finasteride)

2. 主題に関連する文献を検索 - 標題 (/TI), 索引 (/IT) で検索 (化学物質は化学物質名称と CAS 登録番号で検索)

=> S E1-E16/TI, IT AND (((ADVERSE OR SIDE) (2A) (EFFECT OR REACT? OR EVENT OR EXPERIEN?) OR TOXIC?)/TI, IT OR 225/GC)
 L3 249 (CHIBRO-PROSCAR/TI, IT OR FINARA/TI, IT OR FINAST/TI, IT OR FINASTE...

=> D L3 ALL 161

← L3 に含まれていた回答の例

L3 ANSWER 161 OF 249 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
 AN 2001:380324 BIOSIS Full-text
 DN PREV200100380324

TI **Finasteride** and tamsulosin used in benign prostatic hypertrophy: A review of the prescription-event monitoring data.

AU Shakir, S.; Pearce, G.; Mann, R. D. [Reprint author]
 CS Drug Safety Research Unit, Bursledon Hall, Southampton, SO31 1AA, UK
 SO BJU International, (June, 2001) Vol. 87, No. 9, pp. 789-796. print.
 ISSN: 1464-4096.

DT Article
 LA English
 ED Entered STN: 8 Aug 2001
 Last Updated on STN: 19 Feb 2002

AB Objective To review the results of non-interventional observational cohort studies of 14 772 patients treated with **finasteride** and 12 484 patients treated with tamsulosin, both studies being of national proportions and undertaken in general medical practice in England. Methods Both studies were undertaken by prescription-event monitoring (PEM), whereby the exposure data are derived from information provided in strict confidence by the Prescription Pricing Authority of the National Health Service. The outcome data are derived from 'green form' questionnaires completed by the prescribing general practitioners (GPs). Additional data are obtained by medical follow-up with the attending practitioners. Adverse experience was measured in three ways: as reports of events which the doctors considered to represent adverse drug reactions; as reports of reasons for stopping the drug; and by studying the incidence density of each reported event. For these purposes a computerized dictionary containing 1430 higher level terms was used. The duration of exposure in the **finasteride** study was approx 1 year and was approx 6 months in the tamsulosin study. Results The outcome data on the 14 772 and 12 484 patients treated in the **finasteride** and tamsulosin studies were derived from the 63% and 57.4% of the green forms sent out and returned, respectively. The **finasteride** cohort included two women and the tamsulosin cohort 70 women. The mean (SD) age of the men in the two cohorts was, respectively, 69.0 (9.2) and 66.2 (11.7) years. Both drugs were well tolerated on long-term therapy and 69.6% (10 274 patients) of the total **finasteride** and 62.0% (7739 patients) of the total tamsulosin cohort were still receiving the drug at the end of 6 months. In the **finasteride** study, impotence or ejaculatory failure was reported in 2.0% of the patients still receiving the drug; there were reports of decreased libido in 1.0% and gynaecomastia was reported whilst the drug was still being prescribed in 39 patients (0.3% of the cohort). With tamsulosin, uncommon cases of dizziness, headache, malaise and hypotension (89 reports in 12 484 patients, i. e. 0.7% of the cohort) were common to the findings of reported adverse reactions, reasons for stopping the drug and events of highest incidence density. None of the deaths which occurred in either of these large cohorts was attributed by either the reporting GPs or the PEM medical staff to the drugs examined. Conclusion The GPs rated the drugs effective in most patients;



tolerance and adverse experience was consistent with the known pharmacology of the two drugs. No serious, unexpected adverse effects were identified.

CC Urinary system - Pathology 15506
 Pathology - Therapy 12512
 Reproductive system - Pathology 16506
 Pharmacology - General 22002
 Pharmacology - Clinical pharmacology 22005
 Pharmacology - Urinary system 22032
Toxicology - Pharmacology 22504
 Public health: epidemiology - Organic diseases and neoplasms 37054
 Public health: epidemiology - Miscellaneous 37056
 IT Major Concepts
 Urology (Human Medicine, Medical Sciences); Pharmacology; Epidemiology (Population Studies)
 IT Diseases
 benign prostatic hypertrophy: reproductive system disease/male, urologic disease, treatment
 Prostatic Hyperplasia (MeSH)
 IT Chemicals & Biochemicals
 finasteride; antiprostatic hypertrophy-drug, **adverse effects**, tolerability; tamsulosin: antiprostatic hypertrophy-drug, **adverse effects**, tolerability
 IT Miscellaneous Descriptors
 prescription-event monitoring
 GT England (UK, Europe, Palearctic region)
 ORGN Classifier
 Hominidae 86215
 Super Taxa
 Primates; Mammalia; Vertebrata; Chordata; Animalia
 Organism Name
 human: patient
 Taxa Notes
 Animals, Chordates, Humans, Mammals, Primates, Vertebrates
 RN 106133-20-4 (tamsulosin)

IT Chemicals & Biochemicals には、finasteride の記載があるが、RN に finasteride の CAS 登録番号が収録されていないレコード
L3 249 (化学物質名称と CAS 登録番号で検索)
L4 246 (CAS 登録番号のみで検索)

2'. 主題に関連する文献を検索 - 標題 (/TI), 索引 (/IT) で検索 (化学物質は CAS 登録番号で検索)

=> S L1 AND ((ADVERSE OR SIDE) (2A) (EFFECT OR REACT? OR EVENT OR EXPERIEN?) OR TOXIC?)/TI, IT OR 225/CC
 L4 246 L1 AND ((ADVERSE OR SIDE) (2A) (EFFECT OR REACT? OR EVENT OR EXPE...

=> D L4 ALL 7 ← L4 に含まれていた回答の例

L4 ANSWER 7 OF 246 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
 AN 2013:428525 BIOSIS Full-text
 DN PREV201300428525

TI Sex hormones and related compounds, including hormonal contraceptives.

AU Dukes, M. N. G. [Reprint Author]
 CS Trosterudveien 19, N-0778 Oslo, Norway
 mngdukes@gmail.com
 SO Aronson, JK [Editor]. Side Eff. Drugs Annu., (2012) pp. 663-678. Side Effects of Drugs Annual 34: A Worldwide Yearly Survey of New Data in Adverse Drug Reactions and Interactions. Publisher: ELSEVIER SCIENCE PUBLISHERS BV BIOMEDICAL DIVISION, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS. Series: Side Effects of Drugs Annual. CODEN: SEDAD8. ISSN: 0378-6080. ISBN: 978-0-444-59499-0 (H).
 DOI 10.1016/B978-0-444-59499-0.00040-4
 DT Book; (Book Chapter)
 LA English
 ED Entered STN: 12 Jun 2013
 Last Updated on STN: 21 Aug 2013

CC Biochemistry studies - Sterols and steroids 10067
 Pathology - Therapy 12512
 Pharmacology - General 22002
 Pharmacology - Endocrine system 22016
Toxicology - General and methods 22501

IT Major Concepts
 Pharmacology; **Toxicology**
 IT Chemicals & Biochemicals
 flutamide: hormone-drug, pharmacodynamics; estrogens: hormone-drug,
 pharmacodynamics; **finasteride**: enzyme inhibitor-drug, hormone-drug,
 pharmacodynamics
 IT Miscellaneous Descriptors
adverse drug reaction
 RN 13311-84-7 (flutamide)
98319-26-7 (finasteride)

3. 適合性の高い文献を検索 - IT.CB/FA に限定 (1969-1992 は対象外)

=> S E1-E15 (S) ((ADVERSE OR SIDE) (2A) (EFFECT OR REACT? OR EVENT OR EXPERIEN?) OR TOXIC?) (L) IT.CB/FA
 L5 76 (CHIBRO-PROSCAR/BI OR FINARA/BI OR FINAST/BI OR FINASTERIDE/BI O...

3. 適合性の高い文献を検索 - IT.MI/FA に限定 (1969-1992 を補足)

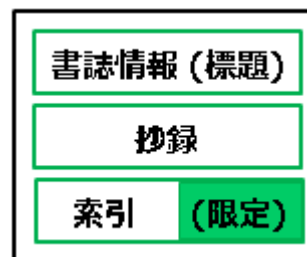
=> S E1-E15 (L) ((ADVERSE OR SIDE) (2A) (EFFECT OR REACT? OR EVENT OR EXPERIEN?) OR TOXIC?) (L) IT.MI/FA RAN=1969, 1992
 L6 1 (CHIBRO-PROSCAR/BI OR FINARA/BI OR FINAST/BI OR FINASTERIDE/BI O...

=> S L5 OR L6
 L7 77 L5 OR L6

=> D L7 ALL 2 77

← L7 に含まれていた回答の例

L7 ANSWER 2 OF 77 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
 AN 2014:163204 BIOSIS Full-text
 DN PREV201400163204
 TI T-cell mediated acute localised exanthematous pustulosis caused by
finasteride.
 AU Feldmeyer, L. [Reprint Author]; Tresch, S.; Cozzio, A.; Kamarashev, J.;
 Harr, T.; Schmid-Grendelmeier, P.; French, L.
 CS Univ Zurich Hosp, CH-8091 Zurich, Switzerland
 SO Allergy (Oxford), (JUN 2011) Vol. 66, No. Suppl. 94, Sp. Iss. SI, pp. 178.
[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1398-9995](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1398-9995).
 Meeting Info.: 30th Congress of the
 European-Academy-of-Allergy-and-Clinical-Immunology (EAACI). Istanbul,
 TURKEY. June 11 -15, 2011. European Acad Allergy & Clin Immunol (EAACI).
 CODEN: LLRGDY. ISSN: 0105-4538. E-ISSN: 1398-9995.
 DT Conference: (Meeting)
 Conference: (Meeting Poster)
 LA English
 ED Entered STN: 19 Feb 2014
 Last Updated on STN: 19 Feb 2014
 CC General biology - Symposia, transactions and proceedings 00520
 Cytology - Animal 02506
 Cytology - Human 02508
 Genetics - Human 03508
 :
 Integumentary system - Physiology and biochemistry 18504
 Integumentary system - Pathology 18506
 Pharmacology - General 22002
 Pharmacology - Clinical pharmacology 22005
 Toxicology - General and methods 22501
 Toxicology - Pharmacology 22504
 Immunology - General and methods 34502
 Immunology - Immunopathology, tissue immunology 34508
 Allergy 35500
 IT Major Concepts
 Pharmacology; Toxicology; Clinical Immunology (Human Medicine, Medical
 Sciences); Dermatology (Human Medicine, Medical Sciences)
 IT Parts, Structures, & Systems of Organisms
 T-cell: immune system, blood and lymphatics; lower abdomen; breast;
 integumentary system



IT Diseases
hypersensitivity: immune system disease
Hypersensitivity (MeSH)

IT Diseases
acute generalized exanthematous pustulosis: integumentary system disease, AGEP

IT Diseases
androgenetic alopecia: integumentary system disease, endocrine disease/gonads, genetic disease
Alopecia (MeSH)

IT Diseases
acute localized exanthematous pustulosis: integumentary drug-induced, symptom, ALFP

IT Chemicals & Biochemicals
finasteride: enzyme inhibitor-drug, pharmacodynamics, **adverse effects**

IT Methods & Equipment
histology: clinical techniques, diagnostic techniques; lymphocytic transformation test: clinical techniques, diagnostic techniques

ORGN Classifier
Hominidae 86215
:

RN 98319-26-7 (finasteride)

IT Chemicals & Biochemicals は
1926-1968, 1993- に収録されている
1969-1992 年は対象外

IT Chemicals & Biochemicals の中の
Finasteride の説明語 adverse effects でヒット

L7 ANSWER 77 OF 77 BIOSIS COPYRIGHT (c) 2014 The Thomson Corporation on STN
AN 1992:298237 BIOSIS Full-text
DN PREV199243010587; BR43:10587
TI THE EFFECT OF **FINASTERIDE** ON SEMEN PRODUCTION AND SEXUAL FUNCTION IN
NORMAL MALES.
AU LEWIS R W [Reprint author]; LIEBER M M; HELLSTROM W J; MCCONNELL J D;
COULAM C B; STEPANAVAGE M; FERGUSON D; GORMLEY G J
CS ROCHESTER, MINN, USA
SO Journal of Urology, (1992) Vol. 147, No. 4 SUPPL, pp. 398A.
Meeting Info.: AUA (AMERICAN UROLOGICAL ASSOCIATION) EIGHTY-SEVENTH ANNUAL
MEETING, WASHINGTON, D.C., USA, MAY 10-14, 1992. J UROL.
CODEN: JOURAA. ISSN: 0022-5347.
DT Conference; (Meeting)
FS BR
LA ENGLISH
ED Entered STN: 16 Jun 1992
Last Updated on STN: 9 Aug 1992

CC General biology - Symposia, transactions and proceedings 00520
Biochemistry studies - General 10060
Enzymes - Physiological studies 10808
Reproductive system - Physiology and biochemistry 16504
Pharmacology - Reproductive system and implantation studies 22028
Toxicology - Pharmacology 22504

IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Pharmacology;
Reproductive System (Reproduction); Toxicology

1969-1992 年を対象に検索し、ヒットした
レコード
細分化されていない索引が付与されている

IT Miscellaneous Descriptors の中の
語でヒット

IT Miscellaneous Descriptors
ABSTRACT HUMAN **MK-906** ENZYME INHIBITOR AGENT **TOXICITY** 5-ALPHA REDUCTASE

ORGN Classifier
Hominidae 86215
:

RN 98319-26-7 (FINASTERIDE)
98319-26-7 (MK-906)
9037-80-3 (REDUCTASE)

