

藥科(二)報告：scifinder & innovation

班級：藥三 C

組別：第九組

學號：b303098129

姓名：蔡芳宜

一、 Scifinder：查詢 MPTP 的機轉及結構

因為有研究顯示 MPTP 為造成帕金森的原因之一，其機轉為在腦中被 MAO(monoamine oxidase)代謝後會形成 MPTP⁺，此物質會傷害黑質體的多巴胺細胞而導致帕金森氏症。所以藥物治療便針對 MAO 下手，目前已上市的 MAO typeB Inhibitor 為 Selegiline、Rasagiline 等等，所以想藉由 sci-finder 來了解他們的結構以及如何合成及改良。



SciFinder - Reference Answer Set - Windows Internet Explorer

https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf

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Add KMP Alert Research Topic "MPTP" > references (9426) > refine by categories > refine "MEDLINE" (2350) > refine "MAO" (236) > refine "2000-" (47)

References 47 References 0 Selected

1. **Neuroprotection of MPTP-induced toxicity in zebrafish dopaminergic neurons**
By McKinley Enid T; Baranowski Timothy C; Blavo Delali O; Cato Candace; Doan Thanh N; Rubinstein Amy L
From Brain research. Molecular brain research (2005), 141(2), 128-37. Language: English, Database: MEDLINE
Parkinson's disease is characterized by a severe loss of dopaminergic neurons resulting in a range of motor deficits. The neurotoxin 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) is known to cause a similar loss of dopaminergic neurons in the human midbrain with corresponding Parkinsonian symptoms. Several animal species have also shown sensitivity to MPTP, including primates, mice, goldfish, and, most recently, zebrafish. This study demonstrates that the effect of MPTP on dopaminergic neurons in zebrafish larvae is mediated by the same pathways that have been demonstrated in mammalia...

2. **Neuroprotection by sodium salicylate against 1-methyl-4-phenyl-1,2,3, 6-tetrahydropyridine-induced neurotoxicity**
By Mohanakumar K P; Muralikrishnan D; Thomas B
From Brain research (2000), 864(2), 281-90. Language: English, Database: MEDLINE
The potent dopaminergic neurotoxin 1-methyl-4-phenyl-1,2,3, 6-tetrahydropyridine (MPTP) is known to produce hydroxyl radicals (OH) in vitro and in vivo. Salicylate (SA) can hydroxylate itself to form 2,3- and 2,5-dihydroxybenzoic acid (DHBA) by utilizing OH. In the present study we investigated the OH scavenging action and neuroprotective effects, if any, of SA in mice treated with MPTP (30 mg/kg i.p. twice, 16 h apart). MPTP treatment resulted in in vivo generation of OH and nigral neuronal insult as evidenced by dopamine depletion in nucleus caudatus putamen (NCP). This also caused signi...

Analysis Refine

Analyze by: Supplementary Terms

Click bar to view only those references within the current answer set

Term	Count
1-Methyl-4-phenyl-1,2,3,6-tetrahydropyridine	47
Monoamine Oxidase	21
MPTP	19
mice	15
monoamine	13
neurotoxicity	12
oxidase	11
Selegiline	11

个首先用 MPTP 搜尋，但資料太多(9426 筆)，所以就用種類(Medline)去篩選→再用 MAO 搜尋→找 2000 年之後的，此時剩 47 筆

SciFinder - Substance Answer Set - Windows Internet Explorer

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Substances

13 Substances 0 Selected Save Print Export

Select All Deselect All Sort by: CAS Registry Number

View: [Icons]

1. Substance Detail 28289-54-5

2. Substance Detail 24526-64-5

3. Substance Detail 14611-51-9

Analysis

Analyze by:

Substance Role

Click bar to view only those substances within the current answer set

Biological Study 13

Preparation 13

Process 13

Reactant or Reagent 13

Uses 13

Analytical Study 12

Formation, Nonpreparative 12

Miscellaneous 12

Occurrence 12

~1,616 References

之後查詢藥物結構↑和反應式↓，選了步驟較簡單的幾個後便到 sciplanner 探索

SciFinder - Reaction Answer Set - Windows Internet Explorer

https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf

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Add KMP Alert Research Topic "MPTP" > references (9426) > refine by categories > refine "MEDLINE" (2350) > refine "MAO" (236) > refine "2000-" (47) > get substances (10) > 28289-54-5 > get reactions (14)

Reactions

14 Reactions 3 Selected Save Print Export

14 Reactions sent to SciPlanner

Select All Deselect All Sort by: Experimental Procedure

Display: [Icons]

1. View Reaction Detail Link Similar Reactions

Single Step Hover over any structure for more options.

Overview

Steps/Stages

Notes

SciFinder - Reference Answer Set - Windows Internet Explorer

https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf

SciFinder®

Explore References Explore Substances Explore Reactions

Research Topic "MPTP" > references (9426) > refine by categories > refine "MEDLINE" (2350) > refine "MAO" (236) > refine "2000-" (47) > refine "selegiline" (12) > get substances (5) > 14611-51-9 > get reactions (45)

12 References 1 Selected

Select All Deselect All Sort by: Citing References (New) ↓

1. Neuroprotection of MPTP-induced toxicity in zebrafish dopaminergic neurons
By McKinley Enid T; Baranowski Timothy C; Blavo Delali O; Cato Candace; Doan Thanh N; Rubinstein Amy L
From Brain research. Molecular brain research (2005), 141(2), 128-37. Language: English, Database: MEDLINE
Parkinson's disease is characterized by a severe loss of dopaminergic neurons resulting in a range of motor deficits. The neurotoxin 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) is known to cause a similar loss of dopaminergic neurons in the human midbrain with corresponding Parkinsonian symptoms. Several animal species have also shown sensitivity to MPTP, including primates, mice, goldfish, and, most recently, zebrafish. This study demonstrates that the effect of MPTP on dopaminergic neurons in zebrafish larvae is mediated by the same pathways that have been demonstrated in mammalia...

2. Monoamine oxidase-inhibition and MPTP-induced neurotoxicity in the non-human primate: comparison of rasagiline (TVP 1012) with selegiline
By Kupsch A; Sautter J; Gotz M E; Breithaupt W; Schwarz J; Youdim M B; Riederer P; Gerlach M; Oertel W H
From Journal of neural transmission (Vienna, Austria : 1996) (2001), 108(8-9), 985-1009. Language: English, Database: MEDLINE
The neurotoxin 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) has been shown to induce parkinsonism in man and non-human primates. Monoamine-oxidase B (MAO-B) has been reported to be implicated in both MPTP-induced parkinsonism and Parkinson's disease, since selegiline (L-deprenyl), an irreversible MAO-B inhibitor, prevents MPTP-induced neurotoxicity in numerous species including mice, goldfish and drosophila. However, one disadvantage of this substance relates to its metabolism to (-)-methamphetamine and (-)-amphetamine. Rasagiline (R-(-)-N-propyl-1-aminindane) is a novel irreversible...

Analysis Refine

Analyze by: Supplementary Terms

Click bar to view only those references within the current answer set

1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine 12

selegiline 11

Monoamine Oxidase 7

inhibitors 4

mice 4

Monoamine 4

MAO-B 3

MPTP 3

↑還是覺得 47 太多，所以又進階搜尋 selegiline 與 MPTP 的關係以及查詢他的藥物和成反應式

SciFinder - Substance Answer Set - Windows Internet Explorer

https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf

SciFinder®

Explore References Explore Substances Explore Reactions

Research Topic "MPTP" > references (9426) > refine by categories > refine "MEDLINE" (2350) > refine "MAO" (236) > refine "2000-" (47) > refine "selegiline" (12) > get substances (5) > 14611-51-9 > get reactions (45)

5 Substances 0 Selected

Select All Deselect All Sort by: CAS Registry Number ↓

1. Substance Detail 28289-54-5

Cc1ccc(cc1)N2C=CCN(C2)

C₁₂ H₁₅ N

2. Substance Detail 14611-51-9

Cc1ccc(cc1)N(C)C#C

Absolute stereochemistry, Rotation (-).

C₁₃ H₁₇ N

Benzeneethanamine, N,α-dimethyl-N-2-propyn-1-yl-, (αR)-

~1,616 References

3. Substance Detail 1875-50-9

Cc1ccc(cc1)NCC#C

C₁₂ H₁₃ N

1H-Inden-1-amine, 2,3-dihydro-N-2-propyn-1-yl-

~45 References

Reactions

Commercial Sources

Regulatory Information

Analysis Refine

Analyze by: Substance Role

Click bar to view only those substances within the current answer set

Biological Study 5

Preparation 5

Process 5

Reactant or Reagent 5

Uses 5

Analytical Study 4

Formation, Nonpreparative 4

Miscellaneous 4

Occurrence 4

↑發現 paper 變少，但是反應式和之前搜尋到的類似

SciFinder - CAS Registry Number 14611-51-9 - Windows Internet Explorer

https://scifinder.cas.org/scifinder/view/scifinder/scifinderExplore.jsf

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Substance Detail

Get References Get Reactions Get Commercial Sources Get Regulatory Info Send to SciPlanner

Link Save Print Export

CAS Registry Number: 14611-51-9

C₁₃ H₁₇ N

Benzeneethanamine, N,α-dimethyl-N-2-propyn-1-yl-, (αR)-
Benzeneethanamine, N,α-dimethyl-N-2-propynyl-, (R)-;
Benzeneethanamine, N,α-dimethyl-N-2-propynyl-, (αR)- (9CI);
Phenethylamine, N,α-dimethyl-N-2-propynyl-, L-(-)- (8CI); (-)-
Deprenyl; (-)-Deprenyl; (-)-Selegiline; (R)-(-)-Deprenyl; (R)-
Selegiline; Anipryl; Emsam; Emsam TTS; L-Deprenyl; Selegiline;
Selegina; Selgene; Zelapar; L-Deprenyl

Deleted CAS Registry Numbers: 172964-89-5

~1,616 References

Document Types: Conference, Dissertation, Journal, Patent

CAS Role Patents Nonpatents Nonspecific Derivatives from Patents Nonspecific Derivatives from Nonpatents

Analytical Study ✓ ✓ ✓ ✓

完成 網路網路 | 受保護模式: 關閉 100% 上午 11:31 2011/12/13

↑詳細的名字和 CAS 編碼

SciFinder - Commercial Source Detail - Windows Internet Explorer

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Commercial Source Detail

Return Previous Next

1. ABI Chem Stock Building Blocks

Catalog Information
Catalog Publication Date: 28 Jun 2011
Order Number: ACIQ2860
Quantity: N/A, Price: contact supplier

Substance Information
CAS Registry Number: 14611-51-9
Chemical Name: selegiline

Ph Me
N Me C≡CH
Absolute stereochemistry, Rotation (-).

Catalog Suppliers
Below are the contributing supplier(s) to this catalog.

Supplier Name	Address	Contact Information	Status
ABI Chem	Samoa Strasse 79 Munich, 58356	Email: sales@abichem.com Web:	Unclassified

完成 網路網路 | 受保護模式: 關閉 100% 上午 11:32 2011/12/13

查看他的商業資料，哪個國家、上市日期、藥廠名和價格

二、 Innovation

想搜尋固定兩星期就會使用的**指甲刀**，它是利用物理的槓桿原理，省時費力的來達到減斷指甲的功能，想知道他的專利是幾時開始申請的以及目前最新的指甲刀專利有哪些創新的發明

1. US20110290080A1

A. DWPI Title

Hand tool for twisting screw caps of containers e.g. nail polish bottle, has yieldable gripping material which is placed on surfaces, to twist off clamping engagement with cap of nail polish bottle arranged between pads

B. Original Title

Nail Clipper With Nail Polish Bottle Top Twist Off Capabilities

C. Abstract

Tools, such as nail clippers, include at least one lever pivotally movable towards and away from another portion of the tools. Yieldable gripping pads of elastomeric material such as rubber, yieldable plastic or the like are disposed on facing surfaces of the lever. The facing pads are usable for clamping about the screw on top of a bottle of nail polish inserted between the pads allowing twisting off of the top by counter-clockwise rotation of the tool relative to the nail polish bottle.

D. First Claim

1. A hand tool including means for performing a cutting function and a nail polish bottle cap twist off function comprising:

- a first member in the form of an elongated lever pivotally mounted for movements, by hand of a user, towards and away from a second member having a cutting edge for performing a finger nail of toe nail cutting function; and
- yieldable gripping material on surfaces facing toward one another of said first and second members for twist off clamping engagement with the cap of a nail polish bottle disposed between said pads.

E. Inventor

MCDUFFEE DENNIS WILLIAM 、KENYON GLORIA LORAINÉ

F. Other information

Publication Number / Date	US20110290080A1/ 2011-12-01
Application Number / Date	US2010790923A/ 2010-05-31
Priority Number / Date	US2010790923A / 2010-05-31

G. IPC

Original IPC	Invention	Version	Additional	Version
Advanced/Full	B67B 7/44	20060101	-	-
	A45D 29/00	20060101		
	B67B 7/18	20060101		

2. Patent WO2011109222A1

A. DWPI Title

Nail clipping or trimming system i.e. multi-piece nail clipping or trimming system for infant or child, has upward interior plate including blade element that slides along interior surface of downward exterior plate and across slot

B. Original Title

None

C. Abstract

A nail clipping system comprises two opposed surfaces (relatively flat, curved or ergonomically or functionally non-planar) **hinged at one end**. The hinge may be a living hinge made from the same or similar structural material as the opposed surfaces, or may be a spring-loaded hinge connecting the two opposed surfaces. Associated with an upper one of the opposed surfaces is at least one (relatively) downward exterior plate, and associated with a lower one of the opposed surfaces is at least one (relatively) upward interior plate directly opposed to a downward exterior plate. The at least one downward exterior plate has **a slot therein accessible** to finger nails. The slot may be linear or curved (to accommodate the curve of nails). The at least one upward interior plate has a blade element that slides along an interior surface of the downward exterior plate and across the slot therein.

D. First Claim

1. A nail clipping system comprising:

- a) two opposed surfaces hinged at one end,
- b) associated with an upper one of the two opposed surfaces is at least one exterior plate,
- c) associated with a lower one of the opposed surfaces is at least one interior plate directly opposed to the exterior plate;
- d) the at least one exterior plate has a slot therein accessible to finger nails; e) the at least one upward interior plate has rigidly attached thereto a blade element that slides along an interior surface of the downward exterior plate and across the slot therein.

E. Standardized:

MCMULLEN THOMAS JAMES

F. Inventor

MCMULLEN Thomas James, US

G. Publication Number / Date

WO2011109222A1/ 2011-09-09

H. Application Number / Date

WO2011US26072A/ 2011-02-24

I. Priority Number / Date

US2010660609A / 2010-03-01

WO2011US26072A / 2011-02-24

3. Patent USD594156S1<這個最特別了>

A. DWPI Title

-

B. Original Title

Nail clipper

C. Abstract

-

D. First Claim

1. The ornamental design for a nail clipper, as shown and described.

E. Assignee / Applicant

F. Standardized:

KAI R&D CENTER CO LTD

Original: Kai R&D Center Co. Ltd., Gifu-ken, JP

G. Inventor

Kita Toshiyuki, Seki, JP

H. Publication Number / Date

USD594156S1/ 2009-06-09

I. Application Number / Date

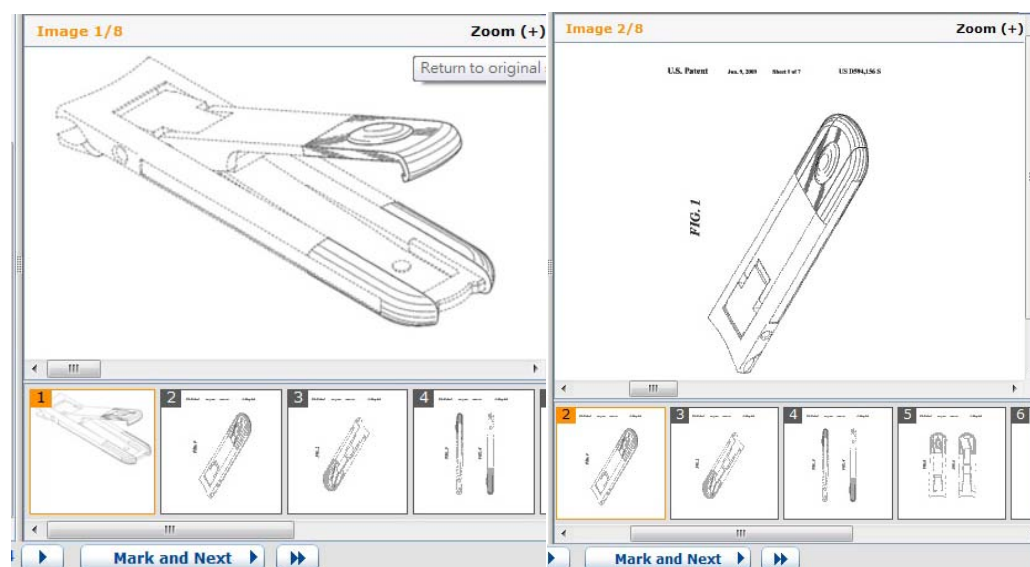
US2008309777F/ 2008-10-07

J. Priority Number / Date

JP20089353A / 2008-04-11

US2008309777F / 2008-10-07

K. IPC



因為他的簡介很少，看是他是很新穎的發明，他可以收起來所以會減少指甲刀的體積

三、心得

Sci-finder:

以前從來沒有接觸過這種軟體，他的功能真的很多原，可以從不同的方式去做進階搜尋，之前查論文時都是沒有頭緒雜亂無章的做搜尋，有了 sci-finder，可以讓我從發表時間、期刊種類…等等去做篩選或是分析，此外他還會幫你標示底色讓關鍵字可以一目瞭然，且用相同相關字但是用不同的順序去搜尋，得到的結果就很不一樣，真的是一種很方便的平台。且對於藥物化學研究者，這是更方便的東西，因為它可以查到結構反應式(不論是蒐尋的物質當產物或是反應物都有相對的資料可以獲得)，且還可以編輯自己想要的反應式，這對藥物開發者是有極大幫助的。只是它的人數上限實在是太少了，所以希望可以讓線上人數增加。

Innovation:

主題就想生活周邊的物品，有很多很不一樣的指甲剪看了讓我大開眼界，還有些長的很像鉗子，如果是我應該不會想要使用喔。還有一個專利在不同國家申請的時間都會有所差異，一個新發明可以去申請許多國家的專利，但是同一個專利在同一個國家就只能申請一次，還有專利申請都要過好久才會核准，這種先搶先贏的制度讓人感受到時間的重要性。