Elsevier Life Science Solution

加速药物研发决策

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爱思唯尔生命科学客户顾问

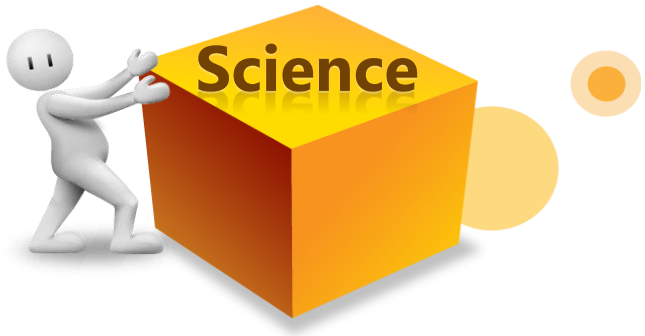
内容

- Elsevier 生命科学解决方案
  1. Reaxys对信息的提炼介绍，以及信息检索基础技巧
  2. Reaxys专利检索策略
  3. RMC辅助药物分子设计研发决策
  4. PharmaPendium辅助药物临床研究
- 总结

从数据库性质出发的分类方法

1. 注重速度
2. 数据整合
3. 缺乏系统化索引
4. 起到“告知”作用

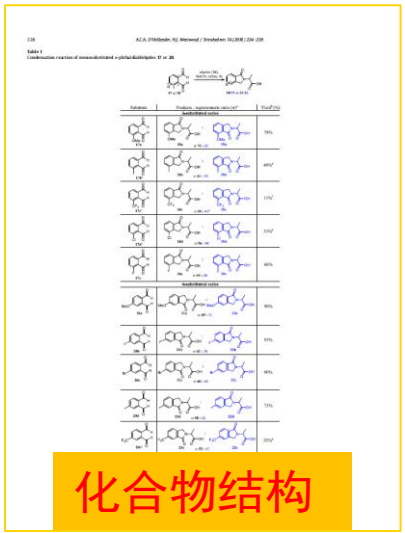
1. 注重宏观面
2. 更新速度慢
3. 参考作用
4. 定位“全局”作用



1. 主要支持研发
2. 主要来源期刊，专利
3. 完善的索引体系
4. 解决“为什么”，“怎么做”，”做什么” 的问题

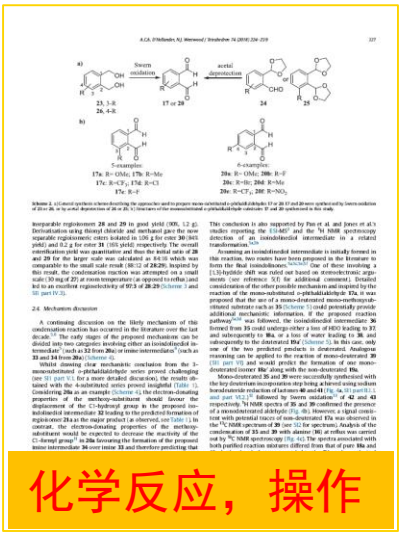
一篇全文期刊中的内容

标题摘要

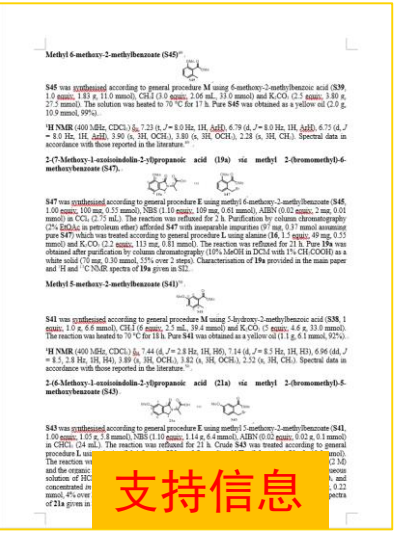


化合物结构

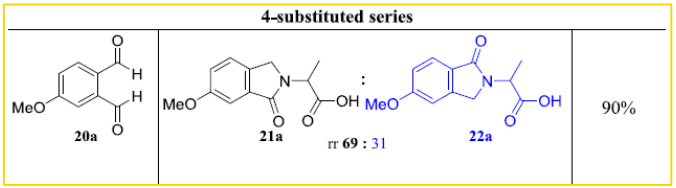
数据，关键内容

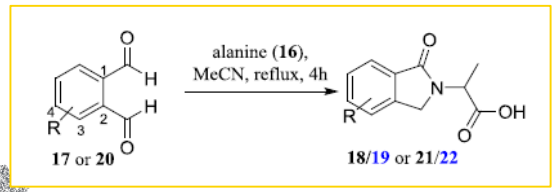


化学反应，操作



支持信息





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21a: **Mp:** 194–196 °C; **IR** ν_{max} cm^{-1} (thin film) 3370 (O–H stretch), 1730 (C=O stretch), 1636 (C=O stretch), 1493 (C=C stretch), 1456 (C–H bend), 1447 (C–H bend), 1196 (C–O stretch), 1022, 770; **^{1}H NMR** (500 MHz, CD_3OD) δ_H 7.48 (d, J = 8.5 Hz, 1H, H4), 7.29 (d, J = 2.5 Hz, 1H, H7), 7.19 (dd, J = 8.5, 2.5 Hz, 1H, H5), 5.00 (q, J = 7.5 Hz, 1H, CH), 4.54 (d, J = 17.0 Hz, 1H, H3), 4.48 (d, J = 17.0 Hz, 1H, H3), 3.86 (s, 3H, OCH_3), 1.61 (d, J = 7.5 Hz, 3H, CH_3); **^{13}C NMR** (125 MHz, CD_3OD) δ_C 174.8 (COOH), 171.0 (C1), 161.6 (C6), 135.8 (C3a), 134.3 (C7a), 125.2 (C4), 121.0 (C5), 107.4 (C7), 56.1 (OCH_3), 51.2 (CH), 48.1 (C3), 15.9 (CH_3); **HRMS** (ES^+) *m/z* calculated for $C_{12}H_{14}NO_4$ $[M+H]^+$: 236.0917; found: 236.0921. See SI1 part IX for experimental procedure and SI2 for ^{1}H and ^{13}C NMR spectra.

22a: **Mp:** 191–193 °C; **IR** ν_{max} cm^{-1} (thin film) 3229 (O–H stretch), 1717 (C=O stretch), 1628 (C=O stretch), 1611 (C=C stretch), 1558 (C=C stretch), 1506 (C=C stretch), 1447 (C–H bend), 1435 (C–H bend), 1298 (C–N stretch), 1206 (C–O stretch), 1086, 1026, 845, 775; **^{1}H NMR** (500 MHz, CD_3OD) δ_H 7.68 (d, J = 8.5 Hz, 1H, H7), 7.13 (d, J = 2.0 Hz, 1H, H4), 7.04 (dd, J = 8.5, 2.2 Hz, 1H, H6), 4.98 (q, J = 7.5 Hz, 1H, CH), 4.57 (d, J = 17.0 Hz, 1H, H3), 4.50 (d, J = 17.0 Hz, 1H, H3), 3.88 (s, 3H, OCH_3), 1.60 (d, J = 7.5 Hz, 3H, CH_3); **^{13}C NMR** (125 MHz, CD_3OD) δ_C 174.8 (COOH), 171.0 (C1),164.9 (C5), 146.2 (C3a), 125.6 (C7), 125.4 (C7a), 116.3 (C6), 108.8 (C4), 56.2 (OCH_3), 50.9 (CH), 48.4 (C3), 15.9 (CH_3); **HRMS** (ES^+) *m/z* calculated for $C_{12}H_{14}NO_4$ $[M+H]^+$: 236.0917; found: 236.0921. See SI1 part IX for experimental procedure and SI2 for ^{1}H and ^{13}C NMR spectra.

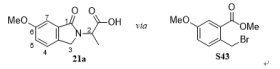
inseparable regioisomers **28** and **29** in good yield (90%, 1.2 g). Derivatisation using thionyl chloride and methanol gave the now separable regioisomeric esters isolated in 1.06 g for ester **30** (84% yield) and 0.2 g for ester **31** (16% yield) respectively. The overall esterification yield was quantitative and thus the initial ratio of **28** and **29** for the larger scale was calculated as 84:16 which was comparable to the small scale result (88:12 of **28**:**29**). Inspired by this result, the condensation reaction was attempted on a small scale (30 mg of **27**) at room temperature (as opposed to reflux) and led to an excellent regioselectivity of **97**:**3** of **28**:**29** (Scheme 3 and SI1 part IV.3).

文献中包含的内容：

一些关键的概念

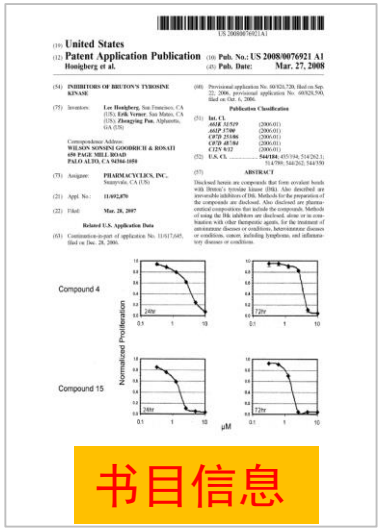
***Supporting Information*中的内容**

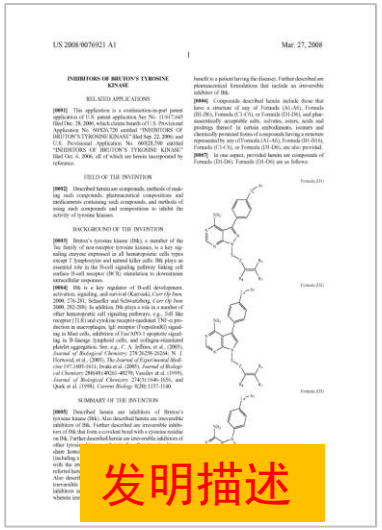
2-(6-Methoxy-1-oxoisoindolin-2-yl)propanoic acid (21a) *via* methyl 2-(bromomethyl)-5-methoxybenzoate (S43)

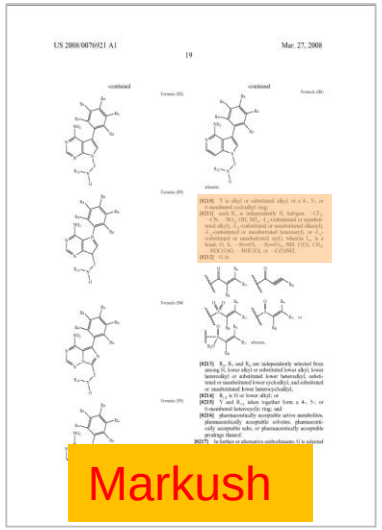


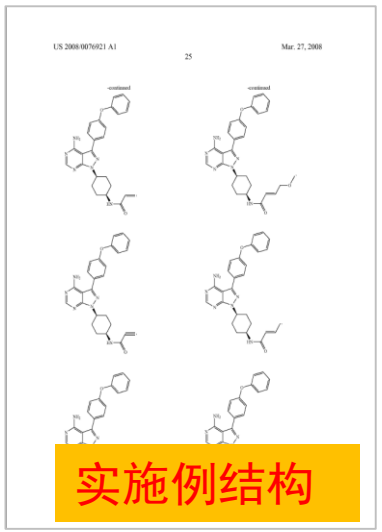
S43 was synthesised according to general procedure **E** using methyl 5-methoxy-2-methylbenzoate (**S41**, 1.00 equiv, 1.05 g, 5.8 mmol), NBS (1.10 equiv, 1.14 g, 6.4 mmol), AIBN (0.02 equiv, 0.02 g, 0.1 mmol) in $CHCl_3$ (24 mL). The reaction was refluxed for 21 h. Crude **S43** was treated according to general procedure **L** using alanine (**16**, 1.5 equiv, 775 mg, 8.7 mmol) and NEt_3 (2.2 equiv, 1.78 mL, 12.8 mmol). The reaction was refluxed for 2 h. Crude **21a** was basified using an aqueous solution of NaOH (2 M) and the organic impurities were extracted with DCM. The aqueous layer was acidified using an aqueous solution of HCl (1 M). The organics were extracted with DCM, combined, dried over $MgSO_4$ and concentrated *in vacuo*. Pure **21a** was obtained after trituration in MeCN as a white solid (51 mg, 0.22 mmol, 4% over 2 steps). Characterisation of **21a** provided in the main paper and ^{1}H and ^{13}C NMR spectra of **21a** given in SI2.

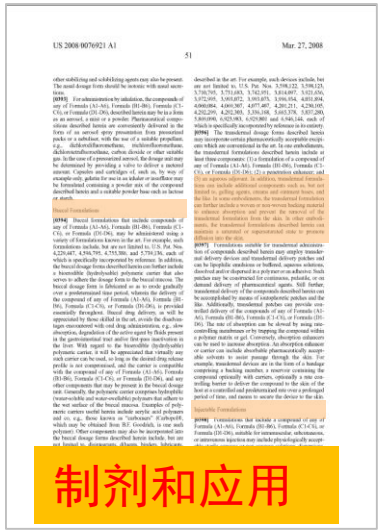
一篇典型的药物方面专利原文

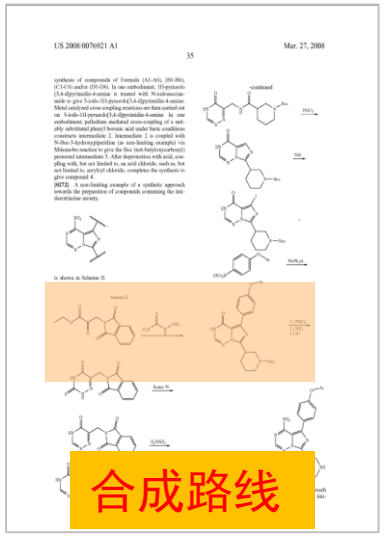

书目信息

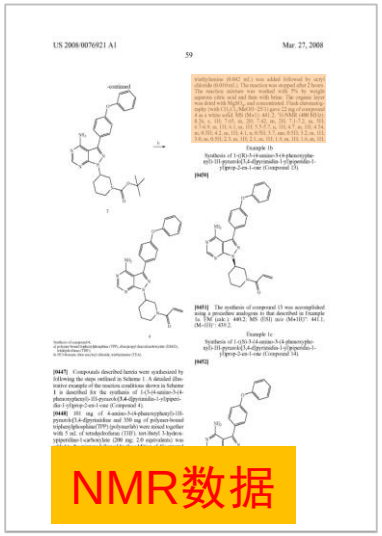

发明描述


Markush


实施例结构


制剂和应用


合成路线


NMR数据


IC50数据

典型药物专利中的内容：

1. 书目内容
2. 专利描述
3. Markush结构及实施例
4. 反应合成路线
5. 实施例的实验室据
6. 实施例的应用数据

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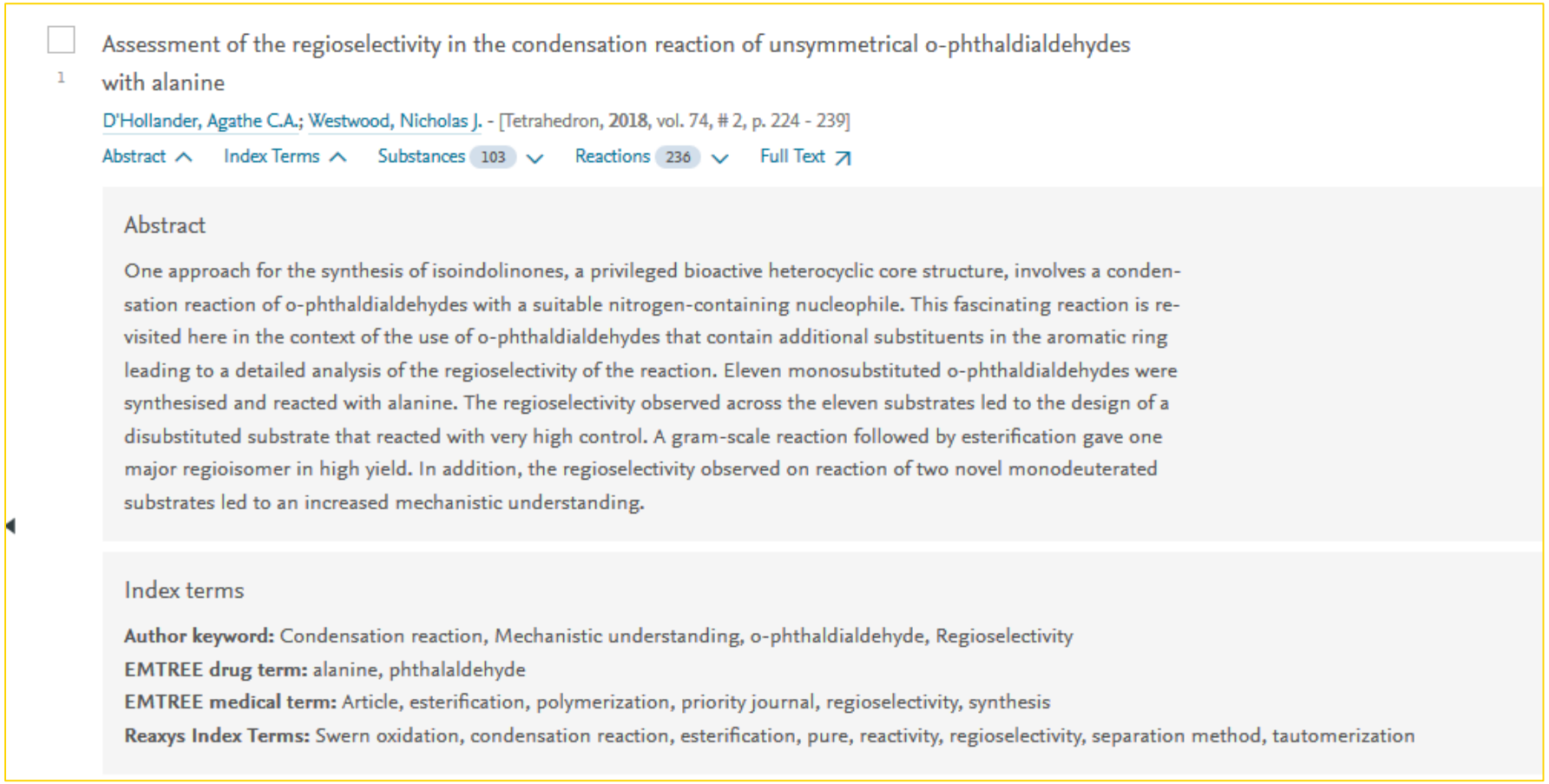
Reaxys对这篇文献的索引—Key Word和题录摘要



1

Assessment of the regioselectivity in the condensation reaction of unsymmetrical o-phthaldialdehydes with alanine

D'Hollander, Agathe C.A.; Westwood, Nicholas J. - [Tetrahedron, 2018, vol. 74, # 2, p. 224 - 239]

Abstract ^ Index Terms ^ Substances 103 v Reactions 236 v Full Text ↗

Abstract

One approach for the synthesis of isoindolinones, a privileged bioactive heterocyclic core structure, involves a condensation reaction of o-phthaldialdehydes with a suitable nitrogen-containing nucleophile. This fascinating reaction is revisited here in the context of the use of o-phthaldialdehydes that contain additional substituents in the aromatic ring leading to a detailed analysis of the regioselectivity of the reaction. Eleven monosubstituted o-phthaldialdehydes were synthesised and reacted with alanine. The regioselectivity observed across the eleven substrates led to the design of a disubstituted substrate that reacted with very high control. A gram-scale reaction followed by esterification gave one major regioisomer in high yield. In addition, the regioselectivity observed on reaction of two novel monodeuterated substrates led to an increased mechanistic understanding.

Index terms

Author keyword: Condensation reaction, Mechanistic understanding, o-phthaldialdehyde, Regioselectivity
EMTREE drug term: alanine, phthalaldehyde
EMTREE medical term: Article, esterification, polymerization, priority journal, regioselectivity, synthesis
Reaxys Index Terms: Swern oxidation, condensation reaction, esterification, pure, reactivity, regioselectivity, separation method, tautomerization

关键内容的提炼源自Elsevier不同的资源，Embase中的一级索引，EI索引，作者关键词，Reaxys自己的词库

ELSEVIER

Reaxys对这篇文献的索引—物质与反应

Assessment of the regioselectivity in the condensation reaction of unsymmetrical o-phthaldialdehydes with alanine

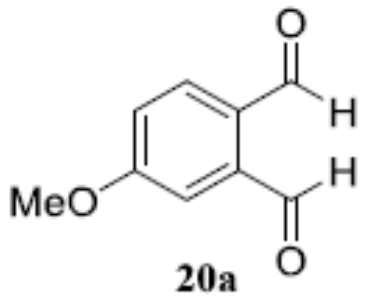
1

D'Hollander, Agathe C.A.; Westwood, Nicholas J. - [Tetrahedron, 2018, vol. 74, # 2, p. 224 - 239]

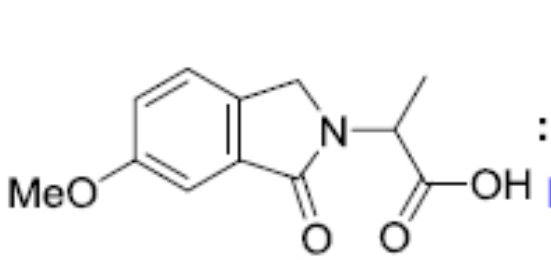
Abstract Index Terms Substances 103 Reactions 236 Full Text

对于原文中出现的化合物21a，Reaxys都提取了什么信息

4-substituted series

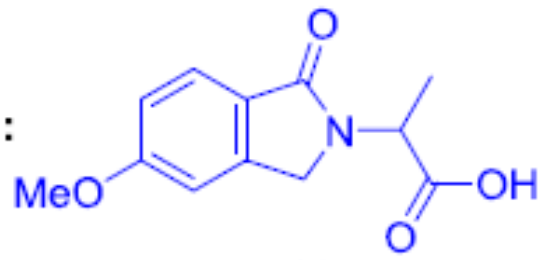


20a



21a

:



22a

rr **69 : 31**

90%

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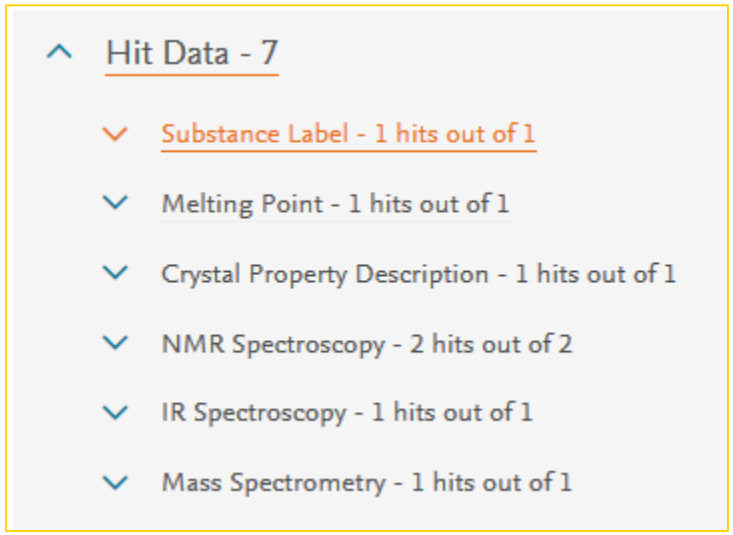
Reaxys对文献中的化合物的深度提炼

Reaxys的深度提炼内容



Reaxys重点提炼的是文献中的关键数据。

Label	Reference
21a	D'Hollander, Agathe C.A.; Westwood, Nicholas J. - [Tetrahedron, **2018**, vol. 74, # 2, p. 224 - 239] Full Text Details Abstract

Melting Point, °C	Reference
194 - 196	D'Hollander, Agathe C.A.; Westwood, Nicholas J. - [Tetrahedron, **2018**, vol. 74, # 2, p. 224 - 239] Full Text Details Abstract

Colour & Other Properties	Location	Reference
white	supporting information	D'Hollander, Agathe C.A.; Westwood, Nicholas J. - [Tetrahedron, **2018**, vol. 74, # 2, p. 224 - 239] Full Text Details Abstract

Description (NMR Spectroscopy)	Nucleus (NMR Spectroscopy)	Solvents (NMR Spectroscopy)	Frequency (NMR Spectroscopy), MHz	Location	Reference
Chemical shifts, Spectrum	1H	d(4)-methanol	500	supporting information	D'Hollander, Agathe C.A.; Westwood, Nicholas J. - [Tetrahedron, **2018**, vol. 74, # 2, p. 224 - 239] Full Text Details Abstract
Chemical shifts, Spectrum	13C	d(4)-methanol	125.8	supporting information	D'Hollander, Agathe C.A.; Westwood, Nicholas J. - [Tetrahedron, **2018**, vol. 74, # 2, p. 224 - 239] Full Text Details Abstract

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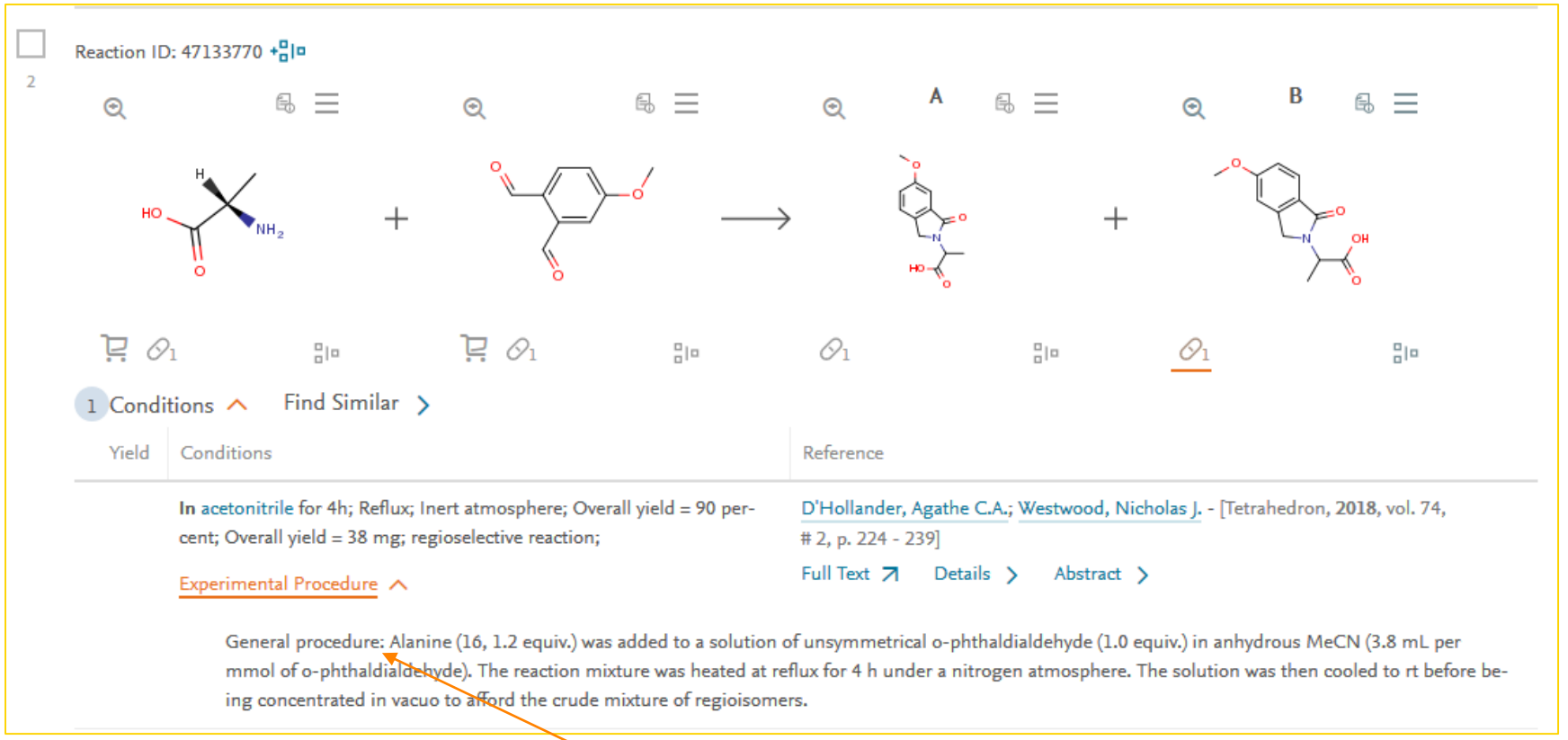
Reaxys对原文反应的提炼（21a)



原文中的General Procedure会被替换成对应的内容

*4.3.9. 2-(6-Methoxy-1-oxoisoindolin-2-yl)propanoic acid (**21a**) with 2-(5-methoxy-1-oxoisoindolin-2-yl)propanoic acid (**22a**)*

A mixture of **21a** and **22a** was synthesised according to general procedure **B** using 4-methoxyphthalaldehyde (**20a**, 1.0 equiv., 30 mg, 0.18 mmol) and alanine (**16**, 1.2 equiv., 19 mg, 0.22 mmol). A

Reaxys数据库对专利信息的提炼

专利中的实施例结构，反应，靶点

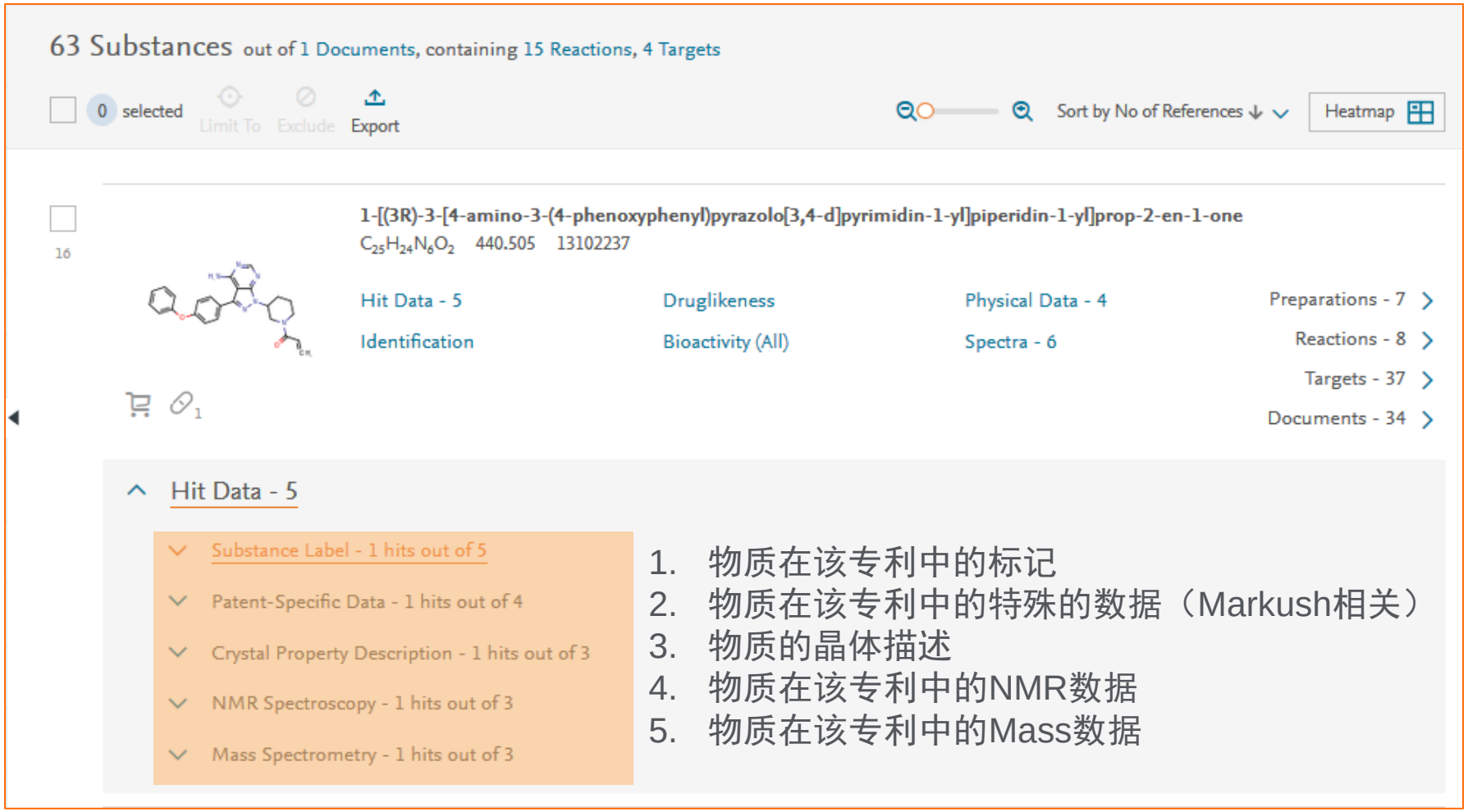
快速处理专利的生物活性数据

专利中的发明描述

专利标记信息：族号，专利分类，公开日期等

原文链接

Reaxys对这篇专利的提炼—实施例结构（其中一个实施例）



1. 物质在该专利中的标记
2. 物质在该专利中的特殊的数据（Markush相关）
3. 物质的晶体描述
4. 物质在该专利中的NMR数据
5. 物质在该专利中的Mass数据

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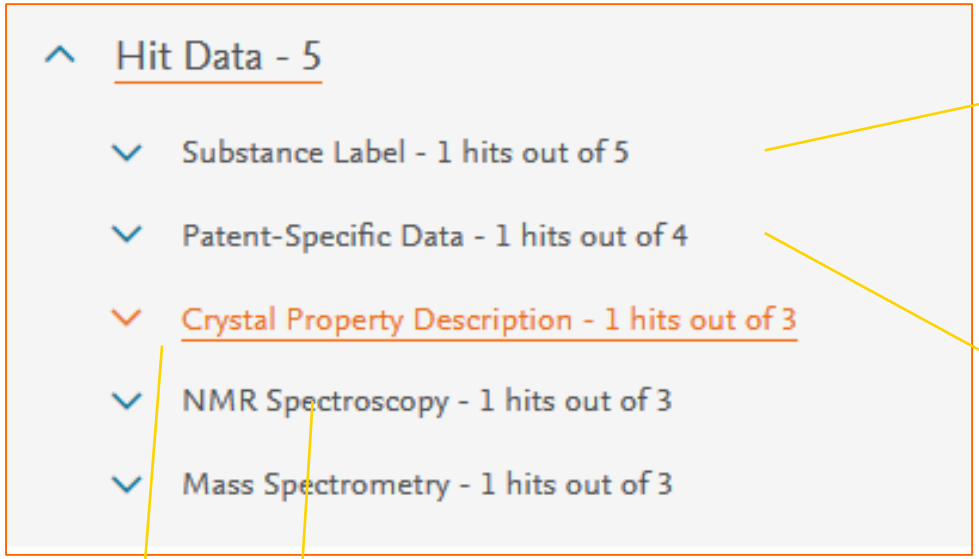
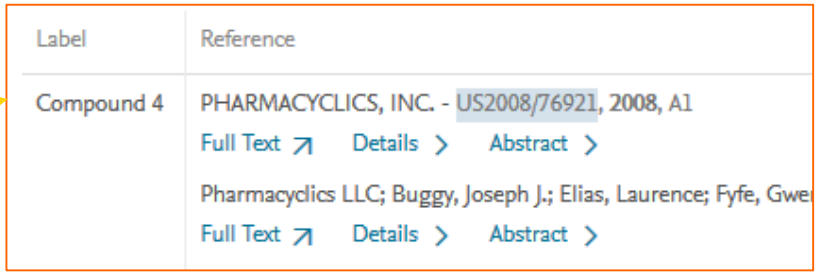
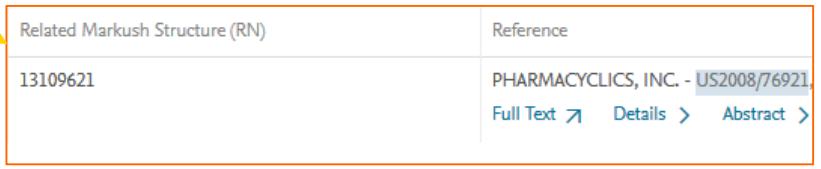
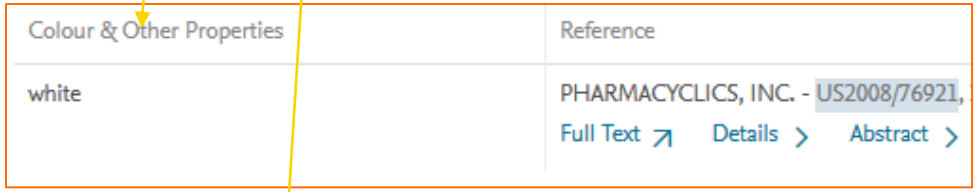
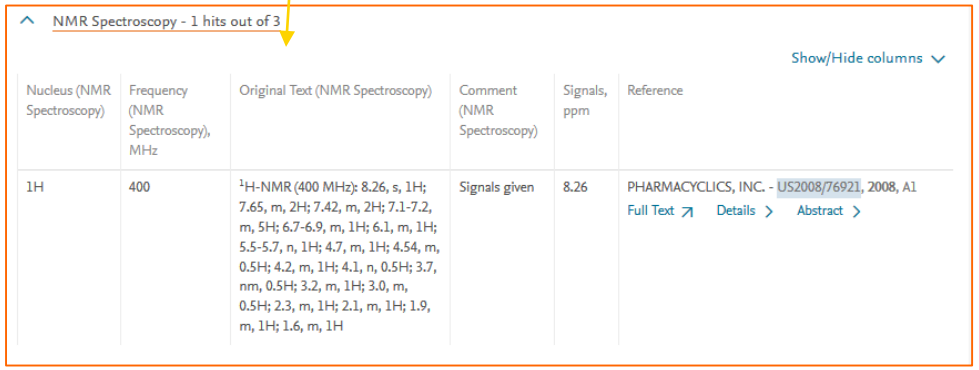
Reaxys对这篇专利的提炼—实施例细节











Tips：

1. 利用物质标识，可以直接在专利全文中直接定位物质在专利中的位置。
2. Related Markush，直接给出实施例被保护的Markush结构
3. 晶体描述，核磁，质谱数据的直接给出

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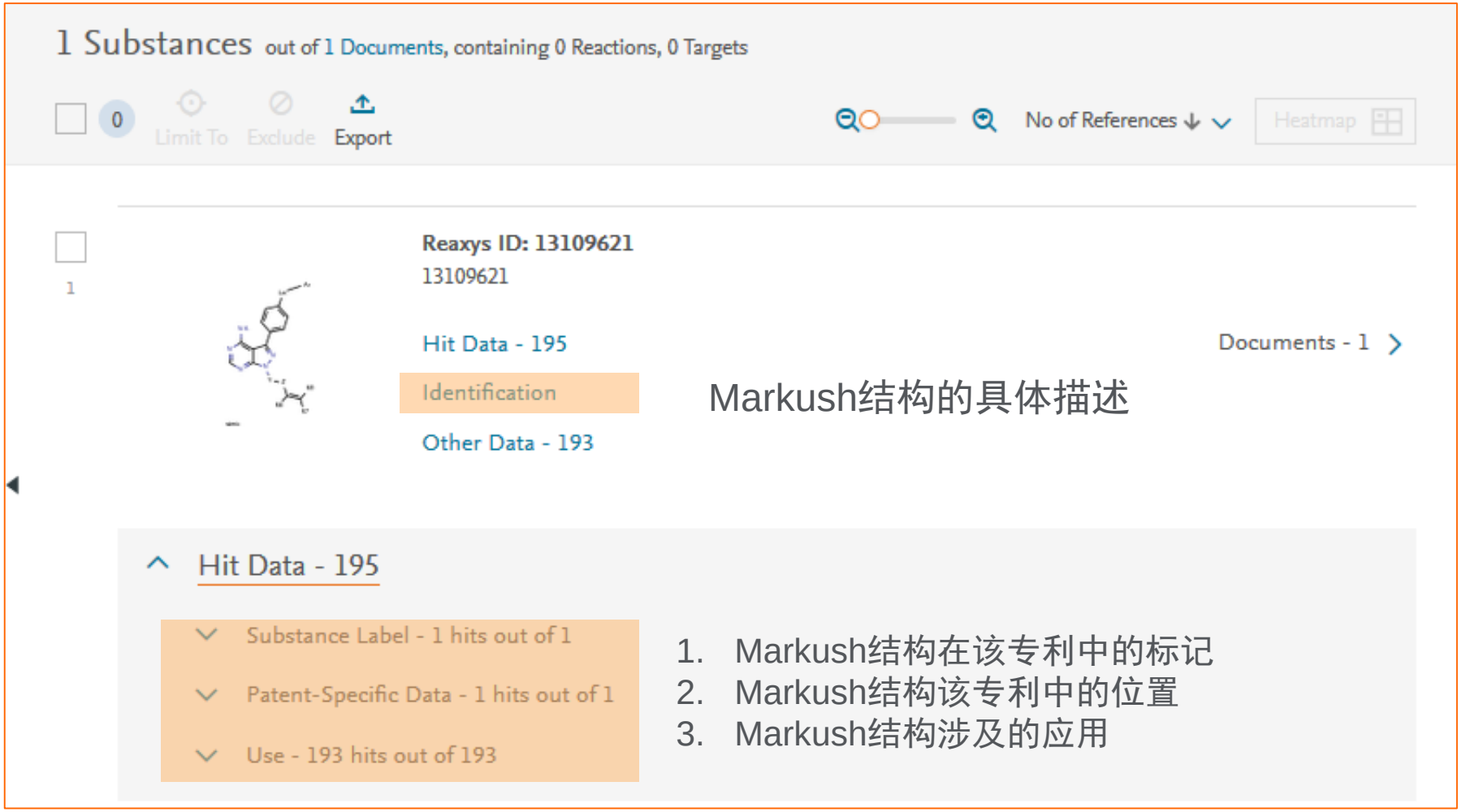
Reaxys对这篇专利的提炼—Markush结构



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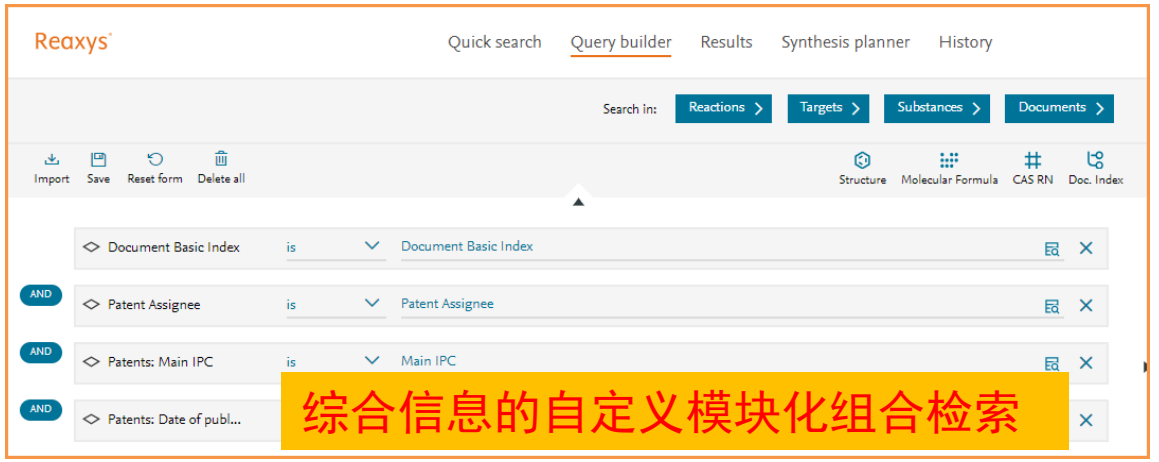
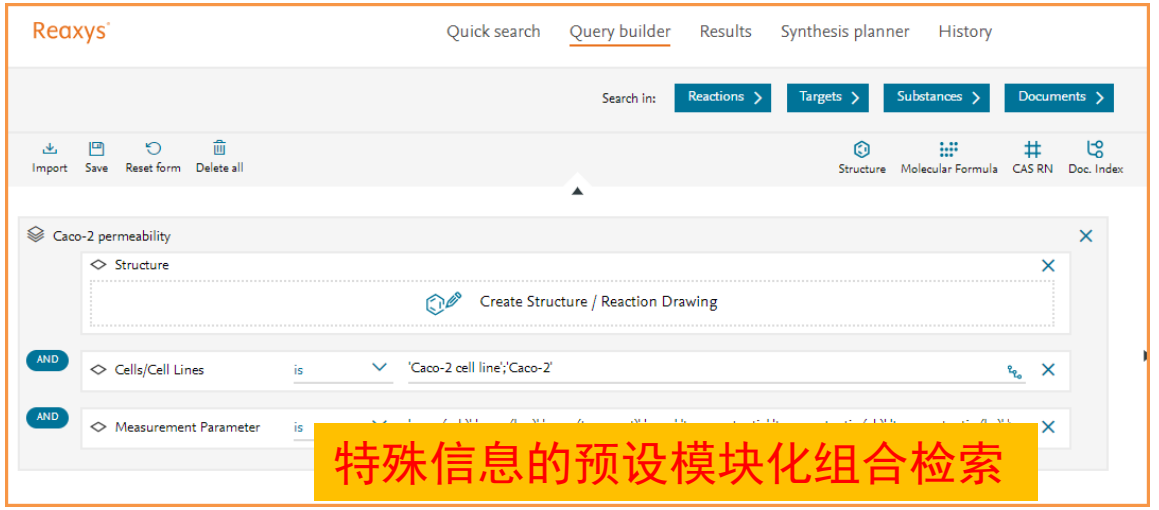
内容

- Elsevier 生命科学解决方案
  1. Reaxys对信息的提炼介绍，以及信息检索基础技巧
  2. Reaxys专利检索策略
  3. RMC辅助药物分子设计研发决策
  4. PharmaPendium辅助药物临床研究
- 总结

Reaxys检索方法总览





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Reaxys结果集筛选方法总览

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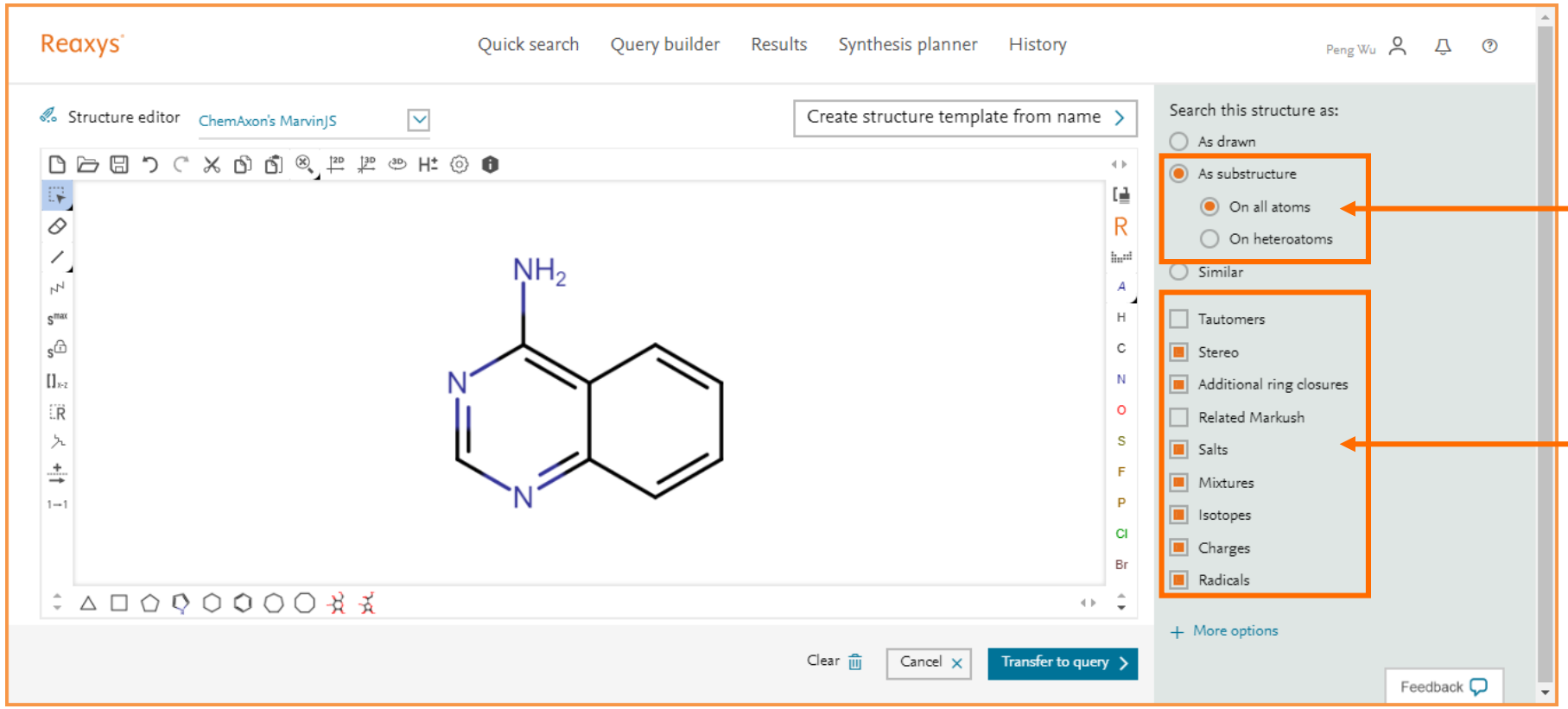
Case 1 化合物衍生物检索及其分析

- 检索以下列母核为基础的衍生化合物信息
- 快速获取其特定信息，核磁图谱，溶解度信息等
- 快速分析衍生物的大致结构式构成
- 快速获取某个特定结构的合成路线



亚结构检索功能扩展所画结构为相关衍生物

这些选项却保，把相关的异构体也检索出来

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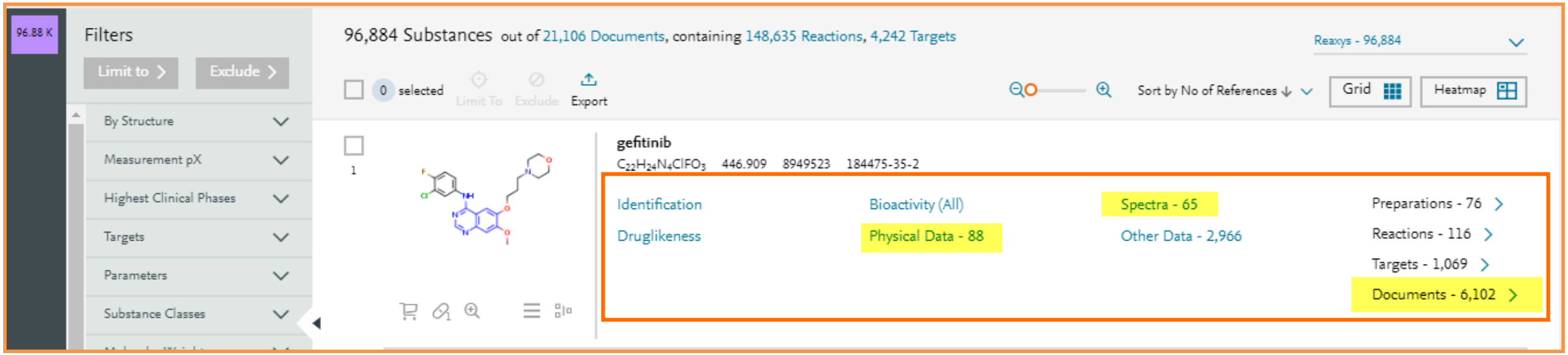
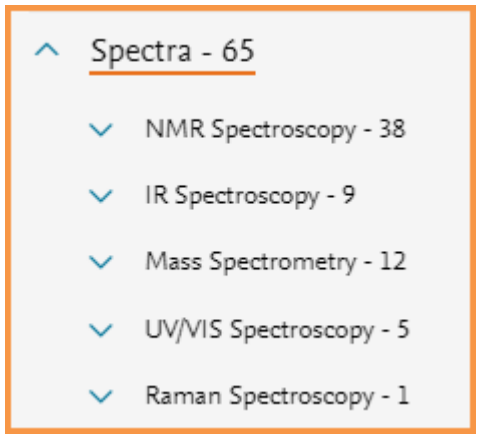
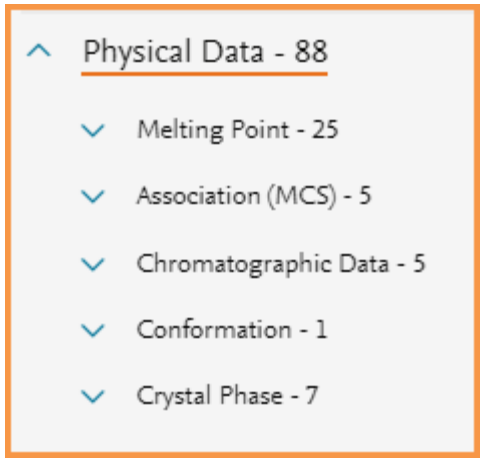
Case 1 化合物衍生物检索结果







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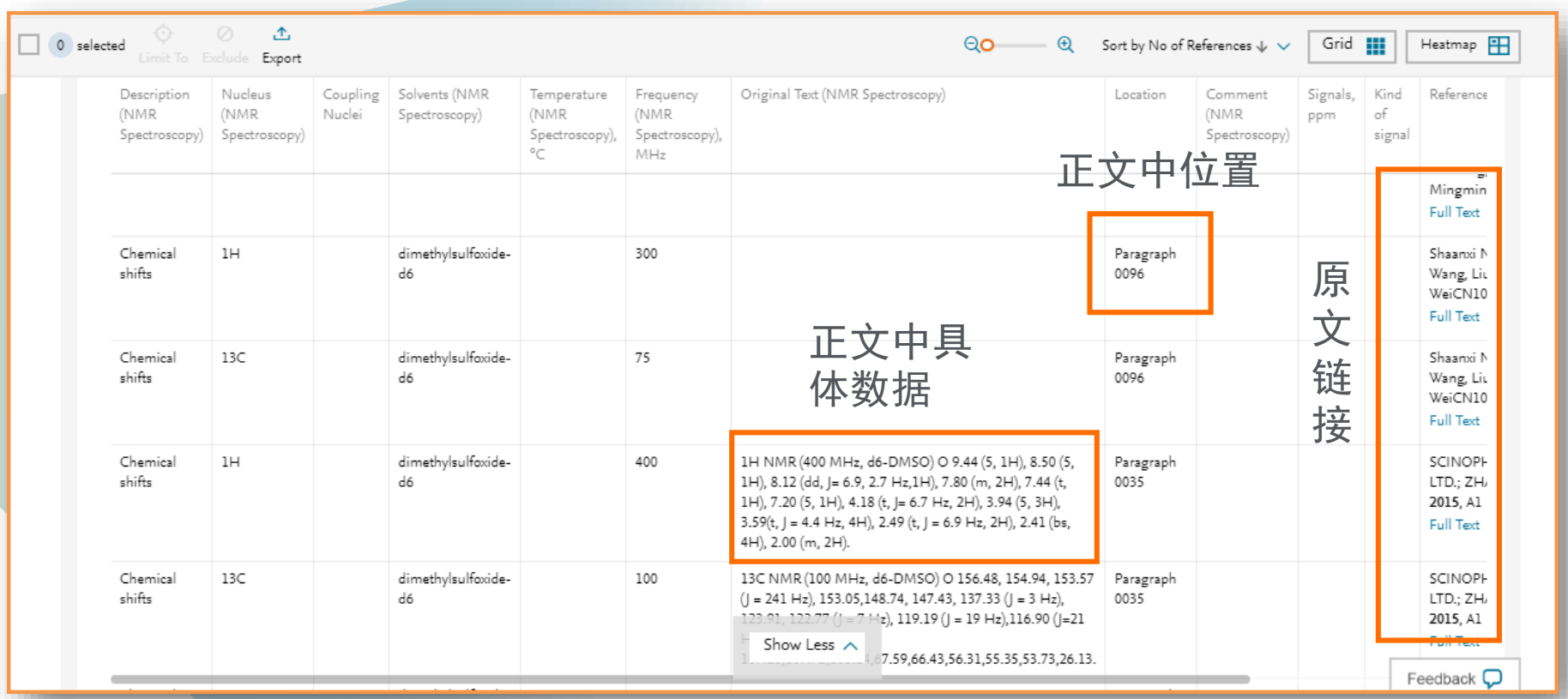
Case 1 化合物衍生物检索结果

- Spectra - 65
  - NMR Spectroscopy - 38
  - IR Spectroscopy - 9
  - Mass Spectrometry - 12
  - UV/VIS Spectroscopy - 5
  - Raman Spectroscopy - 1



Description (NMR Spectroscopy)	Nucleus (NMR Spectroscopy)	Coupling Nuclei	Solvents (NMR Spectroscopy)	Temperature (NMR Spectroscopy), °C	Frequency (NMR Spectroscopy), MHz	Original Text (NMR Spectroscopy)	Location	Comment (NMR Spectroscopy)	Signals, ppm	Kind of signal	Reference
											Mingmin Full Text
Chemical shifts	1H		dimethylsulfoxide-d6		300		Paragraph 0096				Shaanxi N Wang, Liu WeiCN10 Full Text
Chemical shifts	13C		dimethylsulfoxide-d6		75		Paragraph 0096				Shaanxi N Wang, Liu WeiCN10 Full Text
Chemical shifts	1H		dimethylsulfoxide-d6		400	1H NMR (400 MHz, d6-DMSO) O 9.44 (5, 1H), 8.50 (5, 1H), 8.12 (dd, J= 6.9, 2.7 Hz,1H), 7.80 (m, 2H), 7.44 (t, 1H), 7.20 (5, 1H), 4.18 (t, J= 6.7 Hz, 2H), 3.94 (5, 3H), 3.59(t, J = 4.4 Hz, 4H), 2.49 (t, J = 6.9 Hz, 2H), 2.41 (bs, 4H), 2.00 (m, 2H).	Paragraph 0035				SCINOPH LTD.; ZH 2015, A1 Full Text
Chemical shifts	13C		dimethylsulfoxide-d6		100	13C NMR (100 MHz, d6-DMSO) O 156.48, 154.94, 153.57 (J = 241 Hz), 153.05,148.74, 147.43, 137.33 (J = 3 Hz), 119.19 (J = 19 Hz),116.90 (J=21	Paragraph 0035				SCINOPH LTD.; ZH 2015, A1 Full Text

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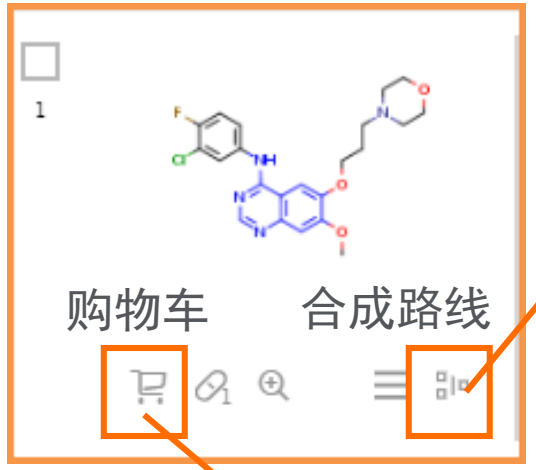
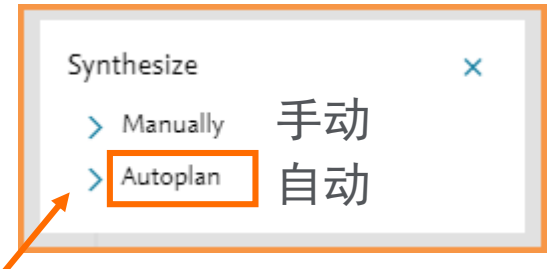
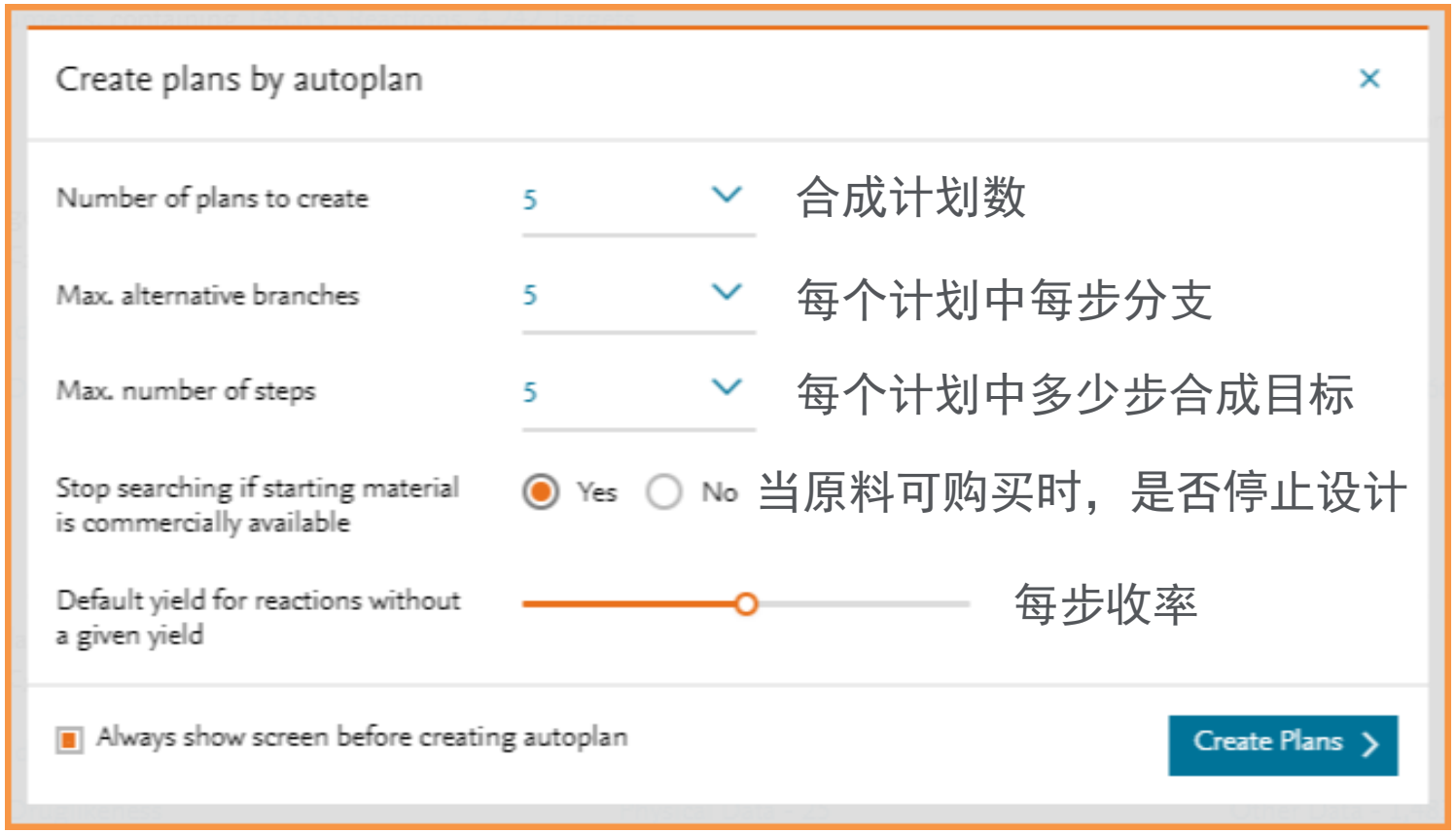
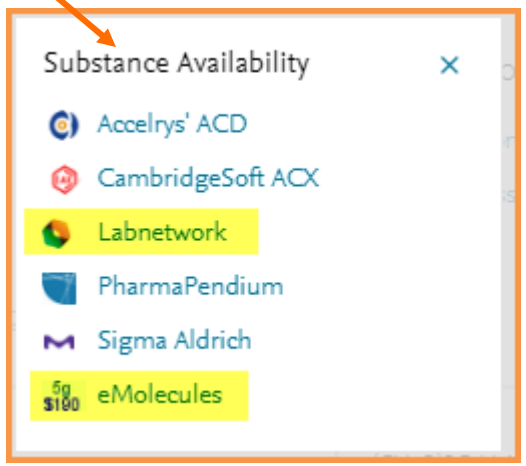
Case 1 化合物合成路线





自动设计合成了路线参数设置





国内供应商

国际供应商

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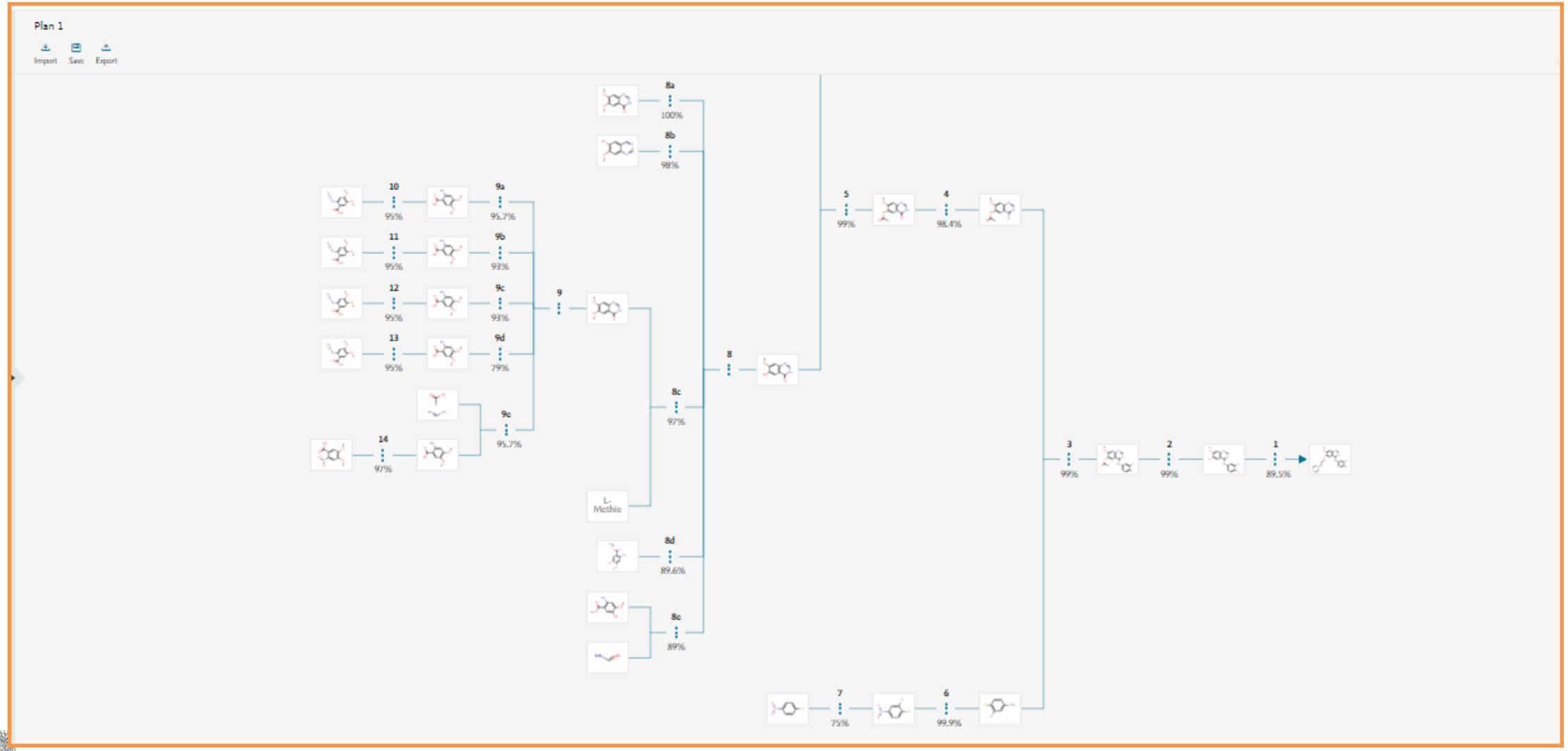
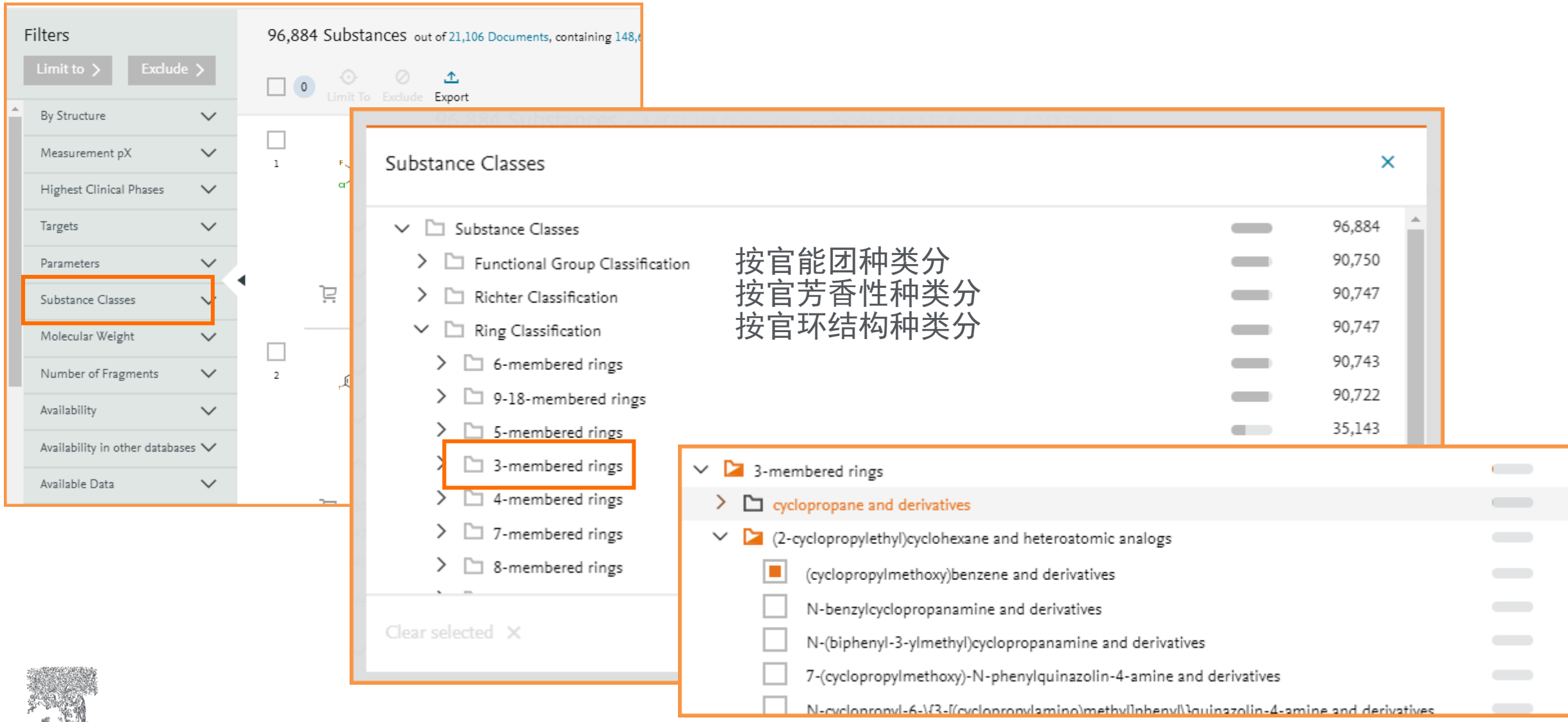
Case 1 化合物合成路线



Case 1 衍生物结构式类型快速分析



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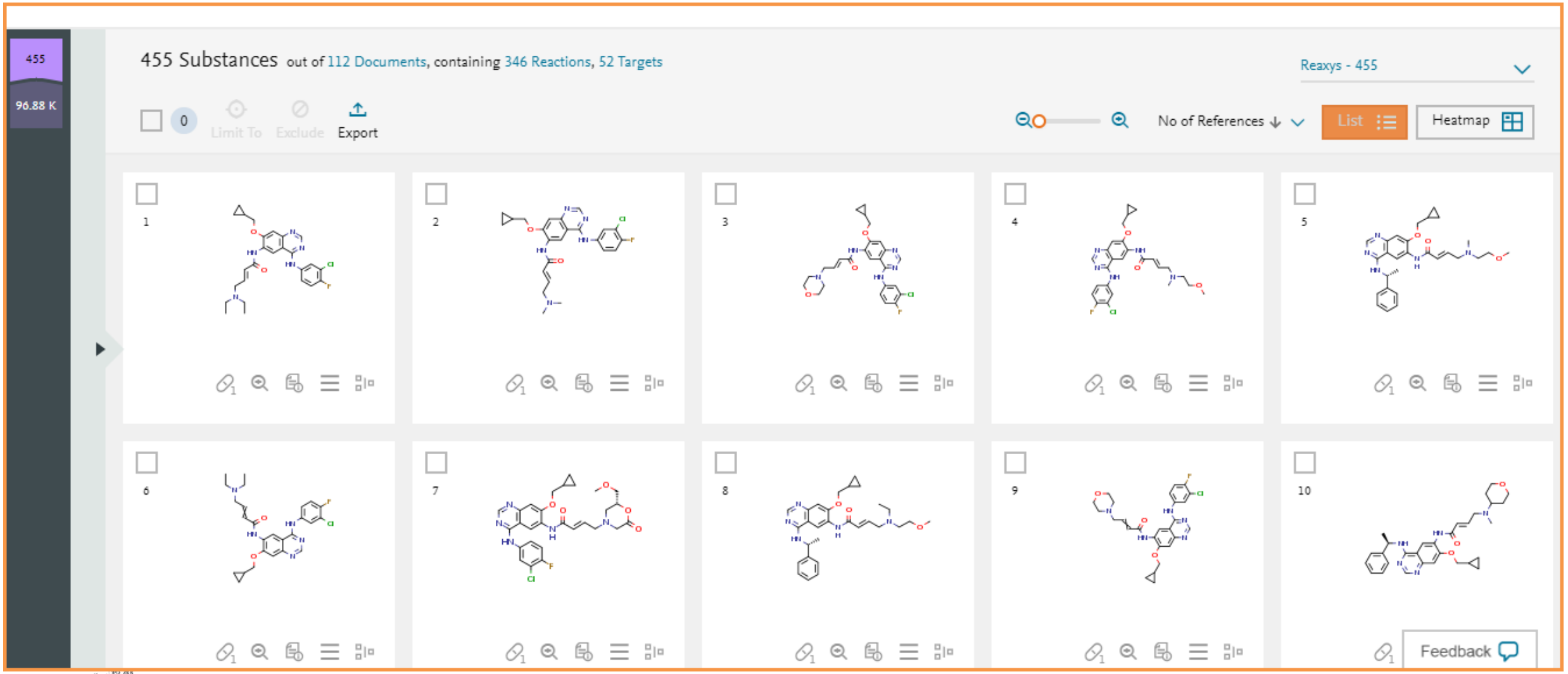
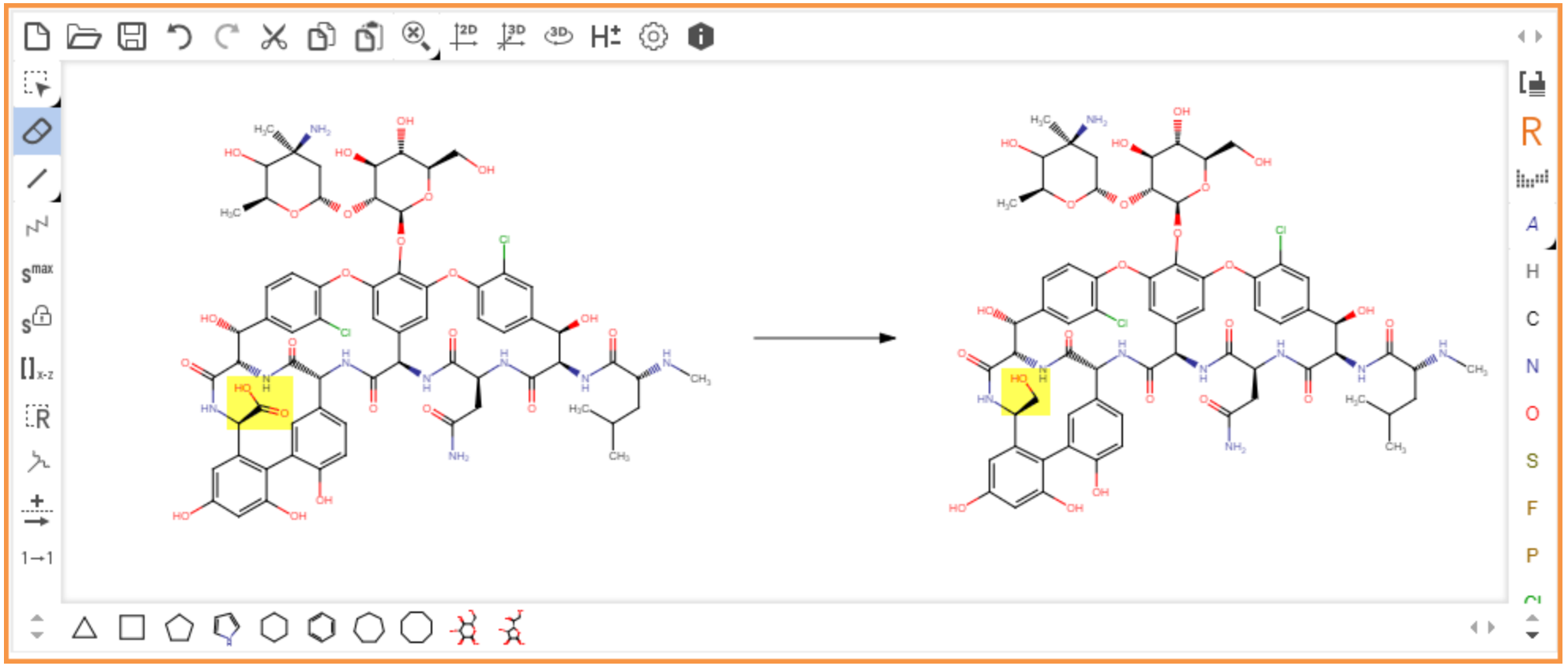
Case 1 衍生物结构式类型快速分析

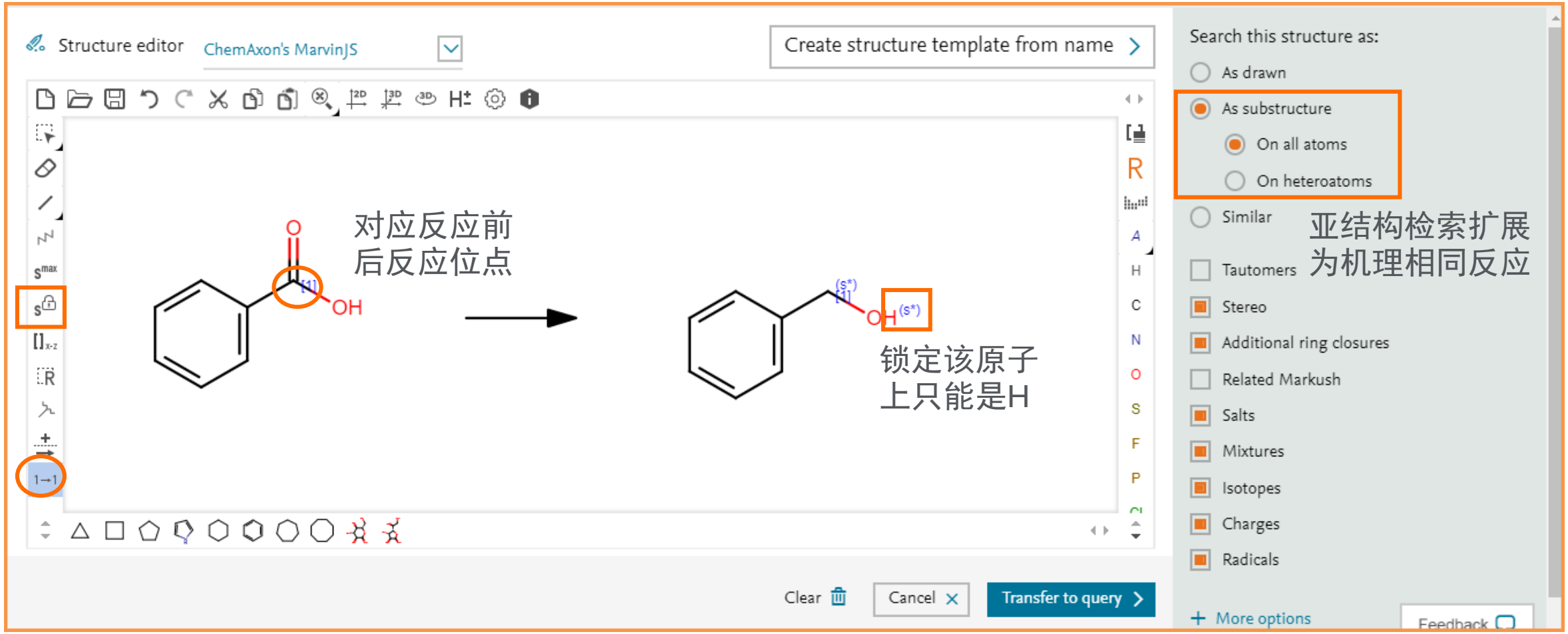


Case 2 同机理化学反应条件的检索

- 参与反应结构太复杂；结构太新颖。如何用同机理的反应条件检索知道实验？
- 如何快速分型最常用试剂？
- 如何快速获取特定催化剂？



Case 2 同机理化学反应条件的检索



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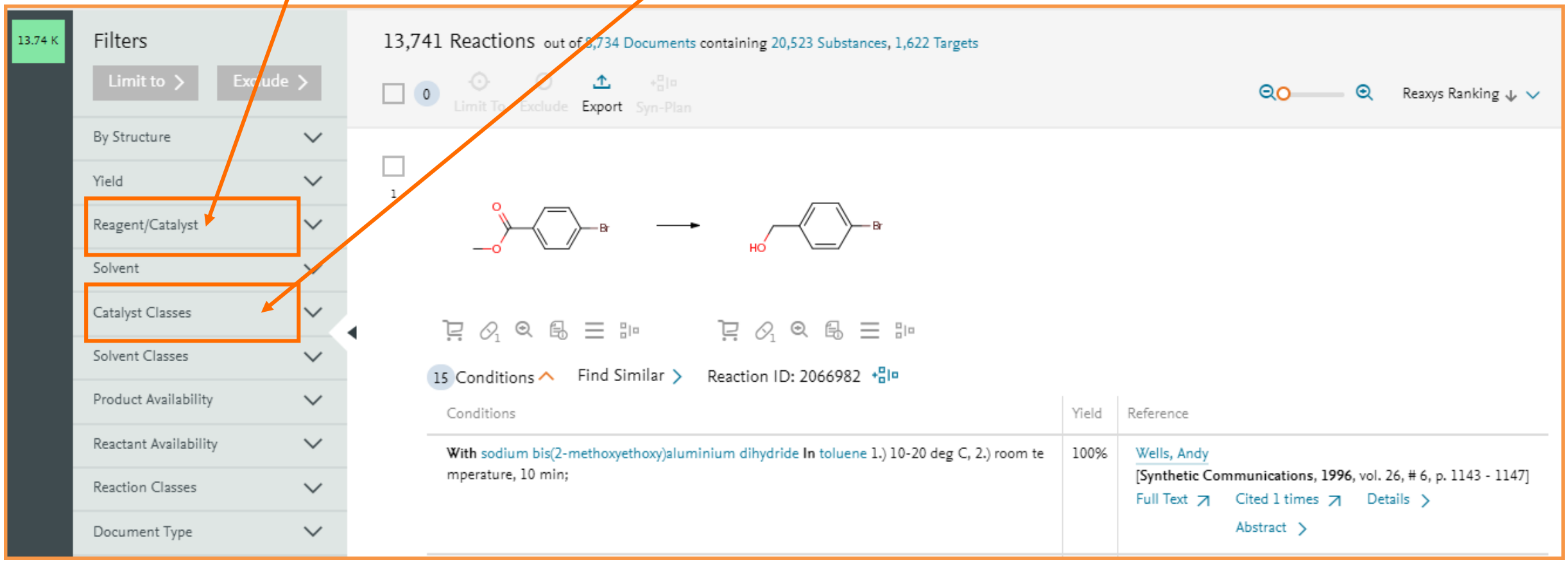
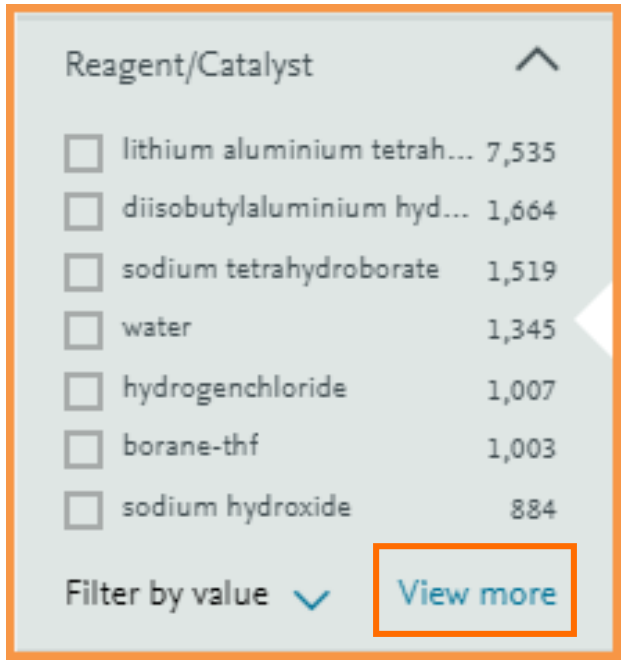
Case 2 结果集的快速筛选

快速获取最常用试剂条件　　快速获取特定试剂条件

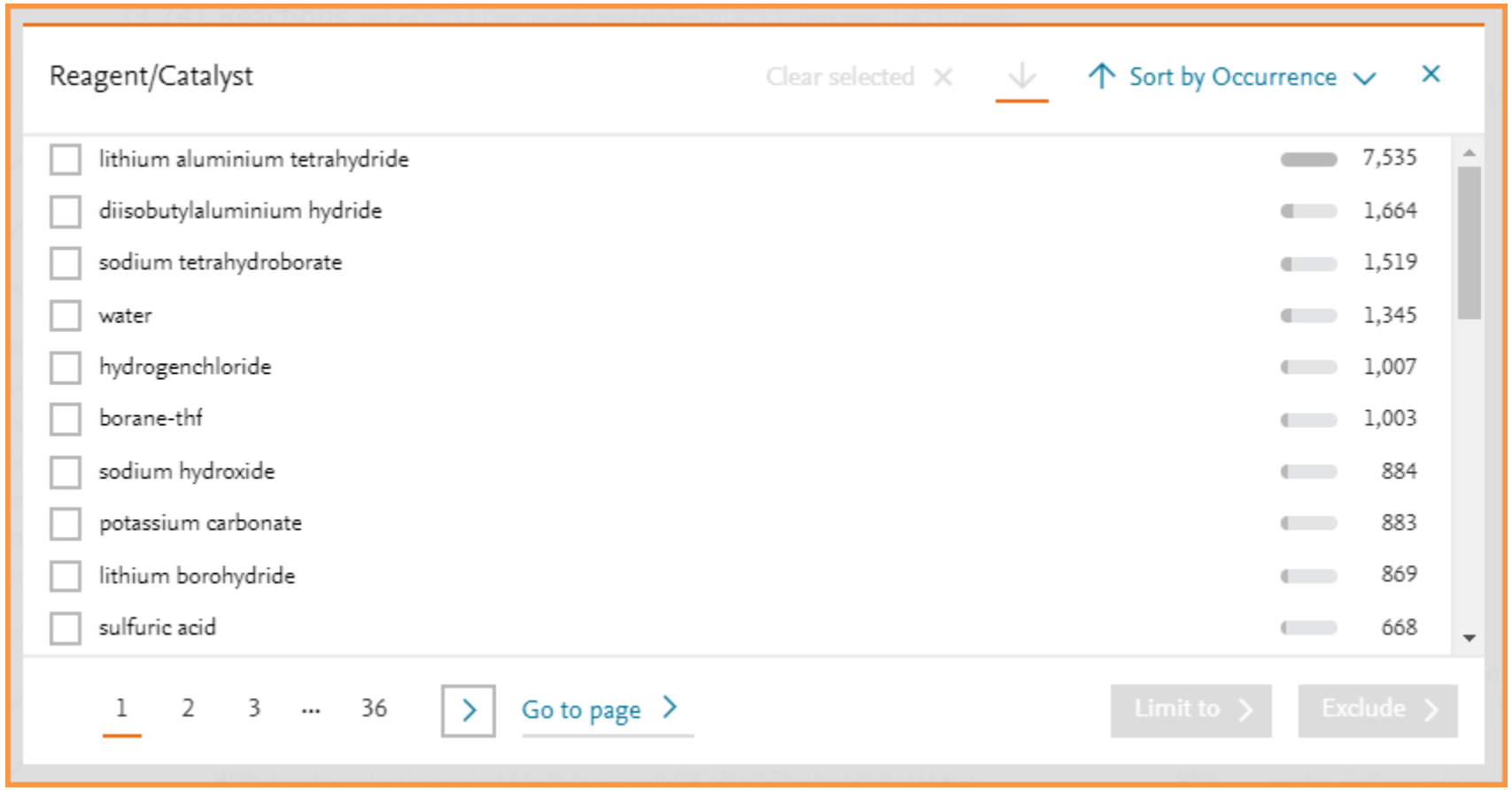


ELSEVIER

Case 2 常用试剂条件获取



把数万条操作步骤中的试剂，按使用频繁度排序



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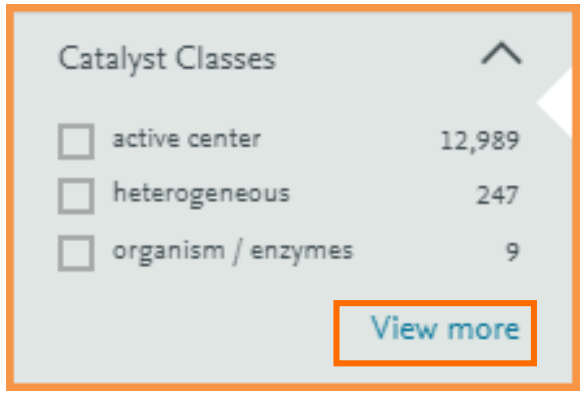
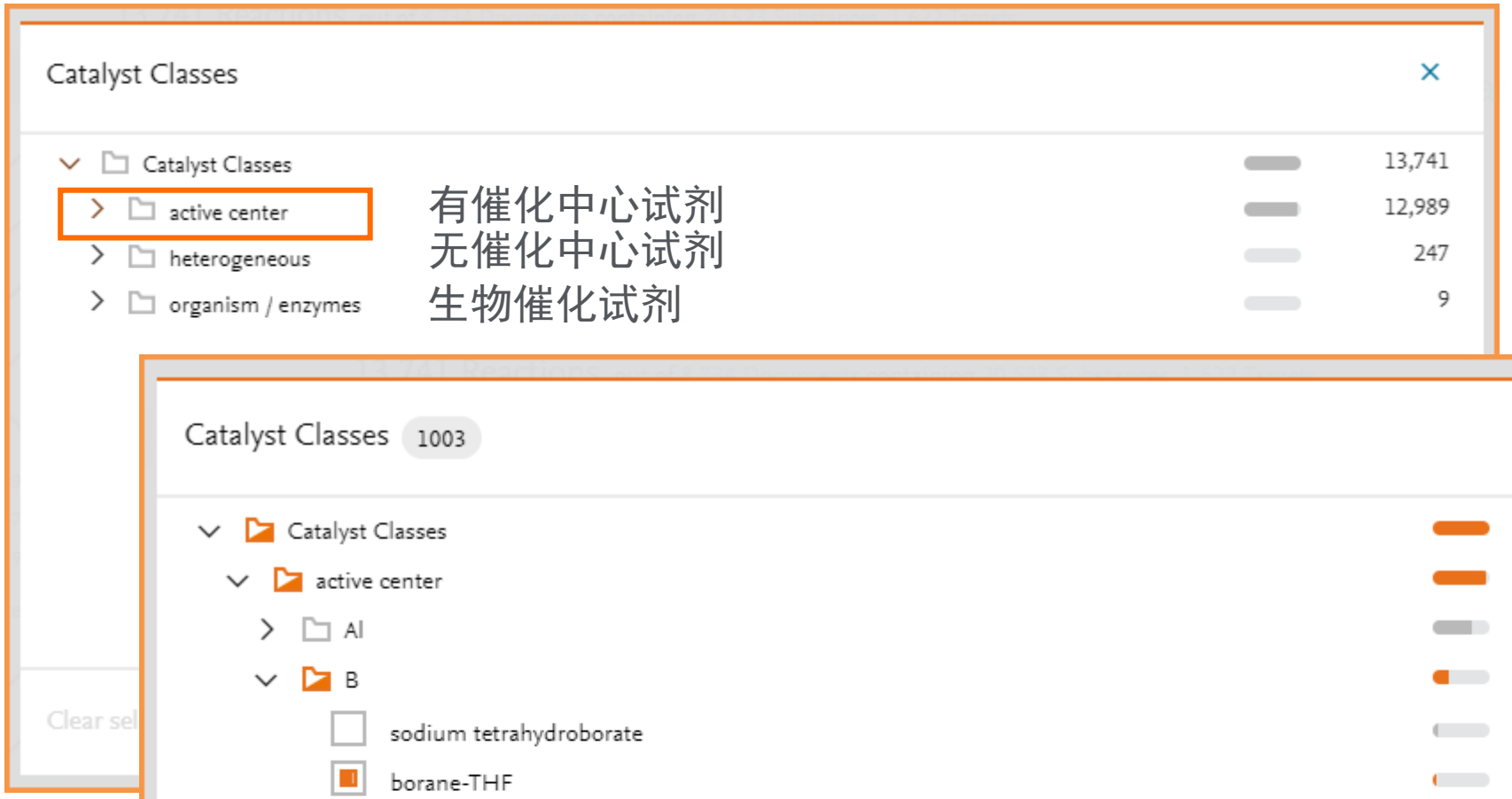
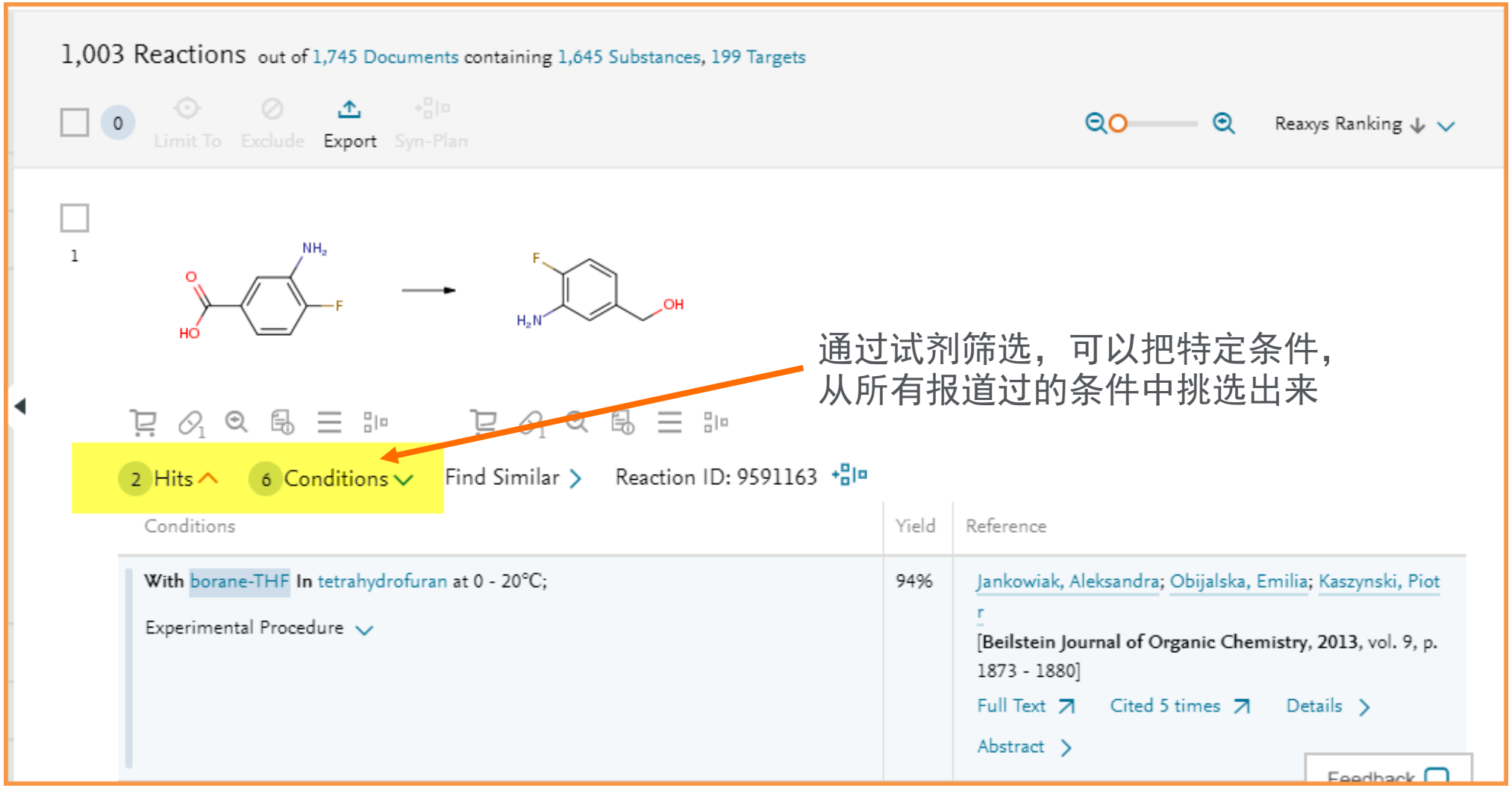
Case 2 特定试剂条件获取





ELSEVIER

Case 2 特定试剂条件获取



通过试剂筛选，可以把特定条件，
从所有报道过的条件中挑选出来

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内容

- Elsevier 生命科学解决方案
  1. Reaxys对信息的提炼介绍，以及信息检索基础技巧
  2. Reaxys专利检索策略
  3. RMC辅助药物分子设计研发决策
  4. PharmaPendium辅助药物临床研究
- 总结

Reaxys中专利收录情况

Patent Offices	Time they cover	Indexed content
Various	1803 - 1980	•Substance and reaction data •Patent citation information •Most organic chemistry
English language patents from World, US, and European patent offices.	1976 - 2001 (automatic) 2001 - present (manual)	Includes the content above and: •Markush substance display •All patent family members •Classification codes
Asian patent offices in original language with English abstracts (China, Taiwan, South Korea, Japan)	2015 - present (manual: JP, KR) 2016 - present (manual: CN,	Includes the same content as for WO, US and EP patent offices

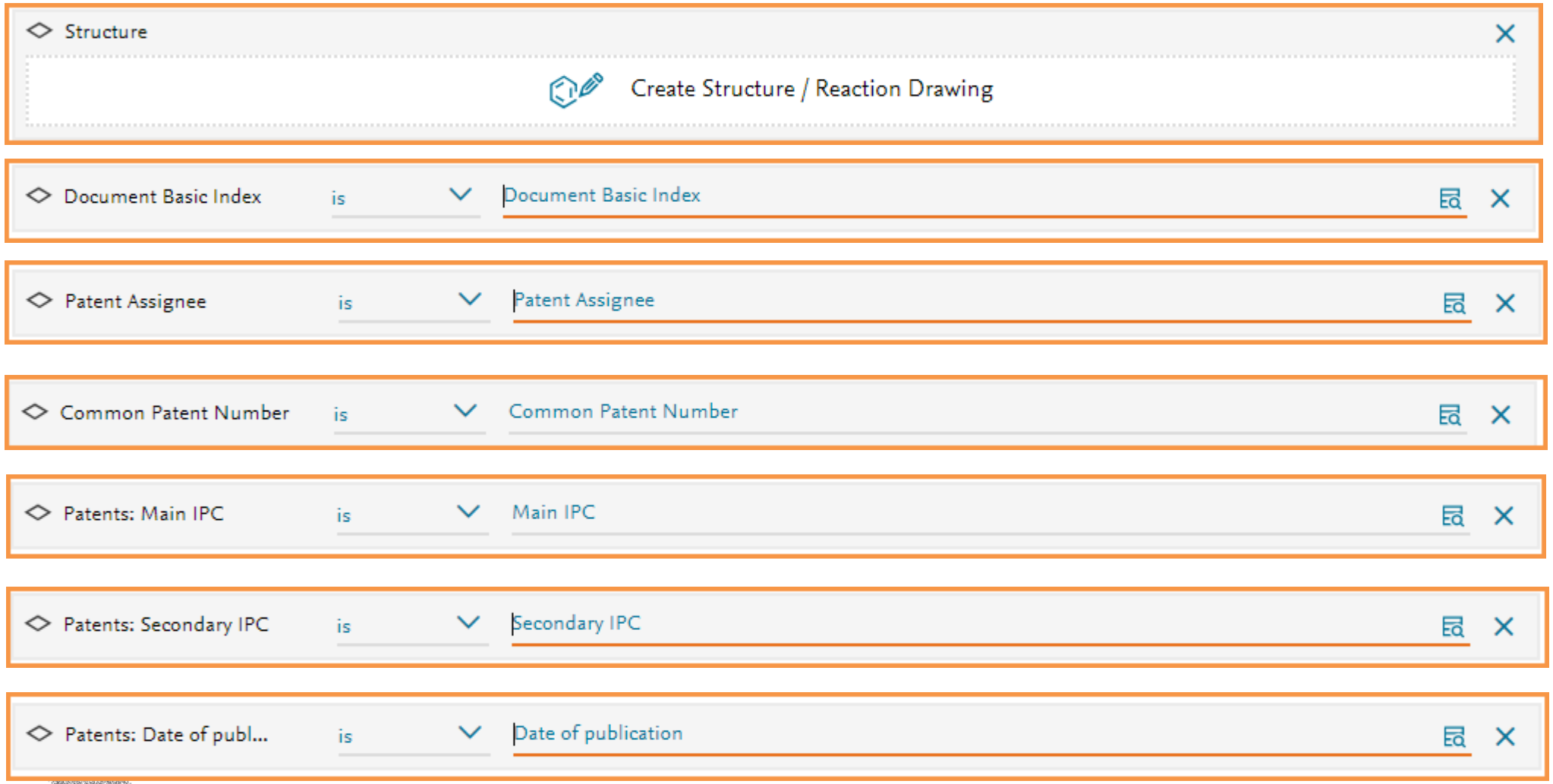
1. 2015年以前，只有JP,KR的专利，没有申请WO，US,EP，则不被收录

2. 2016年以前，只有CN,TW的专利，没有申请WO，US, EP,则不被收录

3. 2015年以前，JP,KR；2016年以前CN,TW; 具有WO,但是不具有英文版本，则不会摘录具体数据

- Reaxys中专利数据的抓取数据（2019年开始）
  - 专利公布，（通常3-10日，由专利局控制）获得专利局传递的数据
  - 文字内容：标题，摘要，claim，专利标记，授权人，发明人等，最迟10天内抓取入数据库
  - 化合物结构：包含名称结构的翻译，最迟1-1.5月内抓取入数据库（内容量影响抓取数据）
  - 生物活性数据等：最迟2月-2.5月内抓取入数据库（内容量影响抓取数据）

常用的综合检索专利的模块等



结构式

关键词索引，可索引专利claim

专利授权人

通用专利号

1级IPC

2级IPC

公开日期（不分专利类型A或B，以最近的日期进行匹配）

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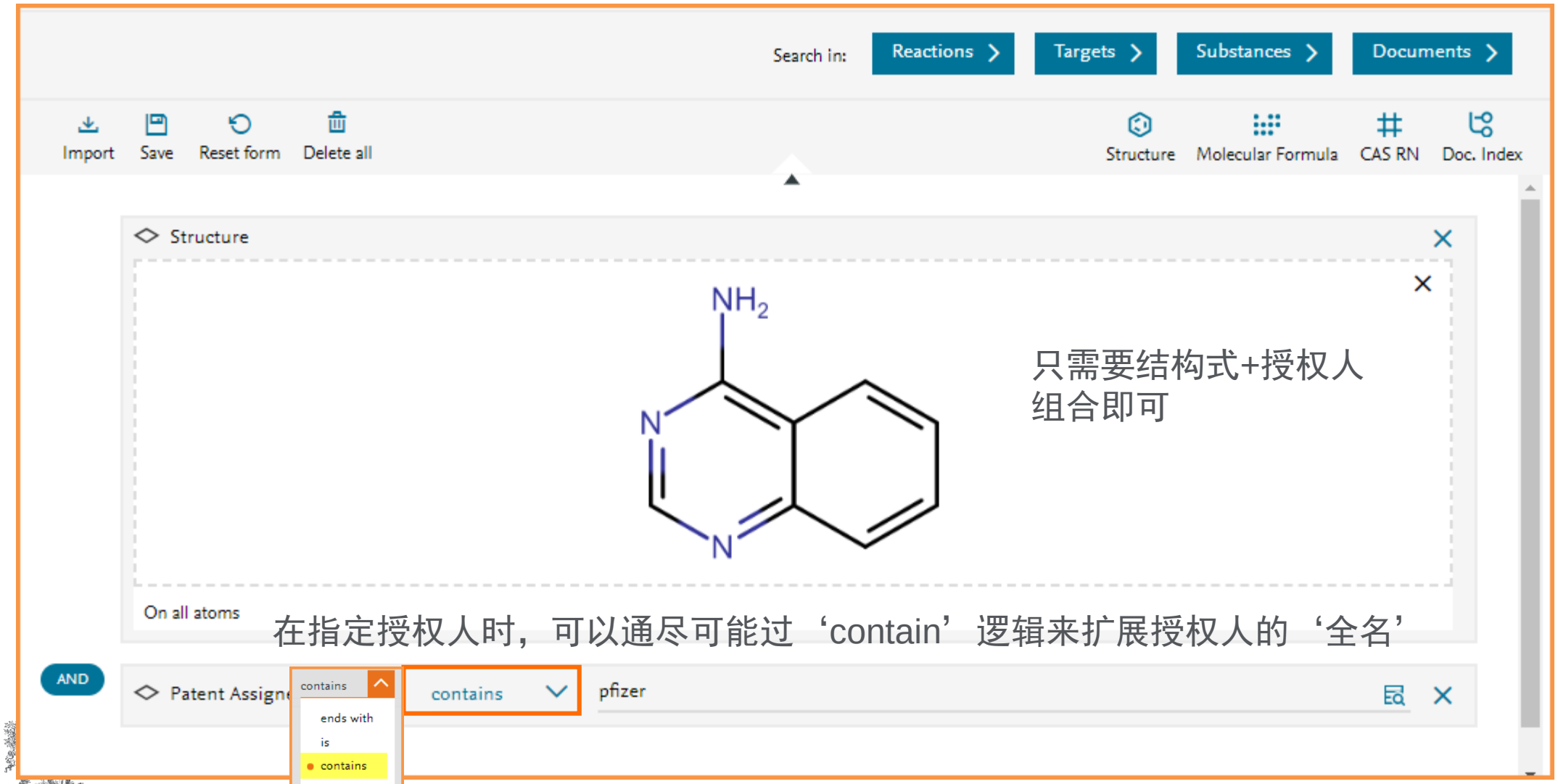
Case 3：检索‘辉瑞’为授权者，并具有某‘特定结构专利’



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设定条件都会去命中

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专利的信息摘取

SUBSTITUTED CARBONUCLEOSIDE DERIVATIVES USEFUL AS ANTICANCER AGENTS

1 PFIZER INC.; KUMPF, ROBERT ARNOLD; MCALPINE, INDRAWAN JAMES; MCTIGUE, MICHELE ANN; PATMAN, RYAN; RUI, EUGENE YUANJIN; TATLOCK, JOHN HOWARD; TRAN-DUBE, MICHELLE BICH; WYTHES, MARTIN JAMES TW2018/2074, **2018**, A

Patent Family Members: CA2969295 A1; US2017/348313 A1; WO2017/212385 A1; TW2018/2074 A; UY37274 A; ...

Abstract Claims Front Page Info Substances 653 Reactions 1611 Full Text

Hit Substances 1

Assignees	Inventors (Authors)
PFIZER INC.; KUMPF, ROBERT ARNOLD; MCALPINE, INDRAWAN JAMES; MCTIGUE, MICHELE ANN; PATMAN, RYAN; RUI, EUGENE YUANJIN; TATLOCK, JOHN HOWARD; TRAN-DUBE, MICHELLE BICH; WYTHES, MARTIN JAMES	KUMPF, ROBERT ARNOLD; MCALPINE, INDRAWAN JAMES; MCTIGUE, MICHELE ANN; PATMAN, RYAN; RUI, EUGENE YUANJIN; TATLOCK, JOHN HOWARD; TRAN-DUBE, MICHELLE BICH; WYTHES, MARTIN JAMES

Patent No	Kind Code	Publ. Date	Application No	Filing Date	Indexed Patent
CA2969295	A1	6	CA2969295	2017/06/01	
US2017/348313	A1	7	US2017-612030	2017/06/02	
WO2017/212385	A1	4	WO201		
TW2018/2074	A	6	TW2017		
UY37274	A	1	UY3727		
AR108763	A1	6	ARP170		
TWI637945	B	2018/10/11	TW2017		
TW2018/40570	A	2018/11/16	TW2017		
AU2017279014	A1	2018/12/13	AU2017		
SG11201810485S	A	2018/12/28	SG1120		
CO2018013105	A2	2018/12/28	CO2018		
CL2018003504	A1	2019/02/01	CL2018		
KR2019/15745	A	2019/02/14	KR2019		

专利标记，便于查询该专利的授权情况

Claims

1. A structure of formula (I) compound of formula or a stereoisomer thereof, tautomers or its pharmaceutically acceptable salt or solvate or prodrug:

Wherein

R_1 Selected from hydrogen, halogen, C_1 - C_6 Alkyl, C_1 - C_6 C alkoxy and$_1$ - C_6 Haloalkyl;

R_2 Selected from hydrogen, halogen, C_1 - C_6 C alkyl and$_1$ - C_6 Haloalkyl;

R_3 Is selected from:

Each R_5 Independently selected from hydrogen, halogen, optionally substituted C_1 - C_6 Alkyl, C_1 - (O) OC_1 - C_3 Alkyl and CH_2 OH. Substituted the base elects from the hydrogen, halogen, hydroxy, amino or C_1 - C_6 Alkyl;

R_4 For the group - $(CHR_6)_s$ - $(Y)_t$ - $(CHR_7)_u$ - R_8 ;

R_6 , R_7 Independently selected from hydrogen, C_{1-6} Alkyl, hydroxy;

C Y is selected from$_{1-6}$ Alkyl, NH or O;

R_8 C selected from optionally substituted$_2$ - C_8 Heterocyclic alkyl, optionally substituted C_3 - C_8 Cy$_0$ Aryl or optionally substituted C_2 - C_{10} Heteroaryl, substituted ethylenically H, C_{1-6} Alkyl, C_2 - C_8 Heterocyclic alkyl, C_3 - C_8 Cycloalkyl, - S (O_2) C_{1-6} Alkyl, - S (O $(CH_2)_w$ C_2 - C_8 Heterocyclic alkyl, - C (O) C_{1-6} Alkyl, - C (O) $(CH_2)_w$ C_3 - C_8 Cycloalkyl, - C (O) $(CH_2)_w$ C_2 - C_8 Heterocyclic alkyl, C_2 - C_{10} Heteroaryl, C_6 - C_{10} Aryl, h

W is selected from 0, 1, 2;

S, t, u independently selected from 0, 1, 2.

2. In the formula (I) compound or its stereoisomers according to Claim 1, tautomers or its pharmaceutically acceptable salt or solvate or prodrug, characterized in that said R_3 Is selected from

3. In the formula (I) compound or its stereoisomers according to Claim 2, tautomers or its pharmaceutically acceptable salt or solvate or prodrug, characterized in that said R_3 Is selected from

4. In the formula (I) compound or its stereoisomers according to Claim 3, tautomers or its pharmaceutically acceptable salt or solvate or prodrug, characterized in that said R_4 Is - OCH_2 R_8 , - CH_2 R_8 , - R_8 ; R_8 Selected from the following group optionally substituted: oxa cyclopropane, oxetane, tetrahydrofuran, tetrahydro - 2H - pyran, azetidine, pyrrolidine, piperidine, morpholine, pyridine, morpholine -3 - one or thiomorpholine 1, 1 - dioxide; substituted ethylenically H, C_{1-6} Alkyl, C_2 - C_8 Heterocyclic alkyl, C_3 - C_8 Cycloalkyl, - S (O_2) C_{1-6} Alkyl, - S (O_2) $(CH_2)_w$ C_3 - C_8 Cycloalkyl, - S (O_2) $(CH_2)_w$ C_2 - C_8 Heterocyclic alkyl, - C (O) C_{1-6} Alkyl, - C (O) $(CH_2)_w$ C_3 - C_8 Cycloalkyl, - C (O) $(CH_2)_w$ C_2 - C_8 Heterocyclic alkyl, C_2 - C_{10} Heteroaryl, C_6 - C_{10} Aryl, hydroxy or halogen.

5. In the formula (I) compound or its stereoisomers according to Claim 4, tautomers or its pharmaceutically acceptable salt or solvate or prodrug, characterized in that said R_8 Selected from the following

专利Claim便于理解专利的发明内容

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Case 4：检索2019年2月，与CD137相关的，人用药，含抗原或抗体的医药配置品（生物药类专利）

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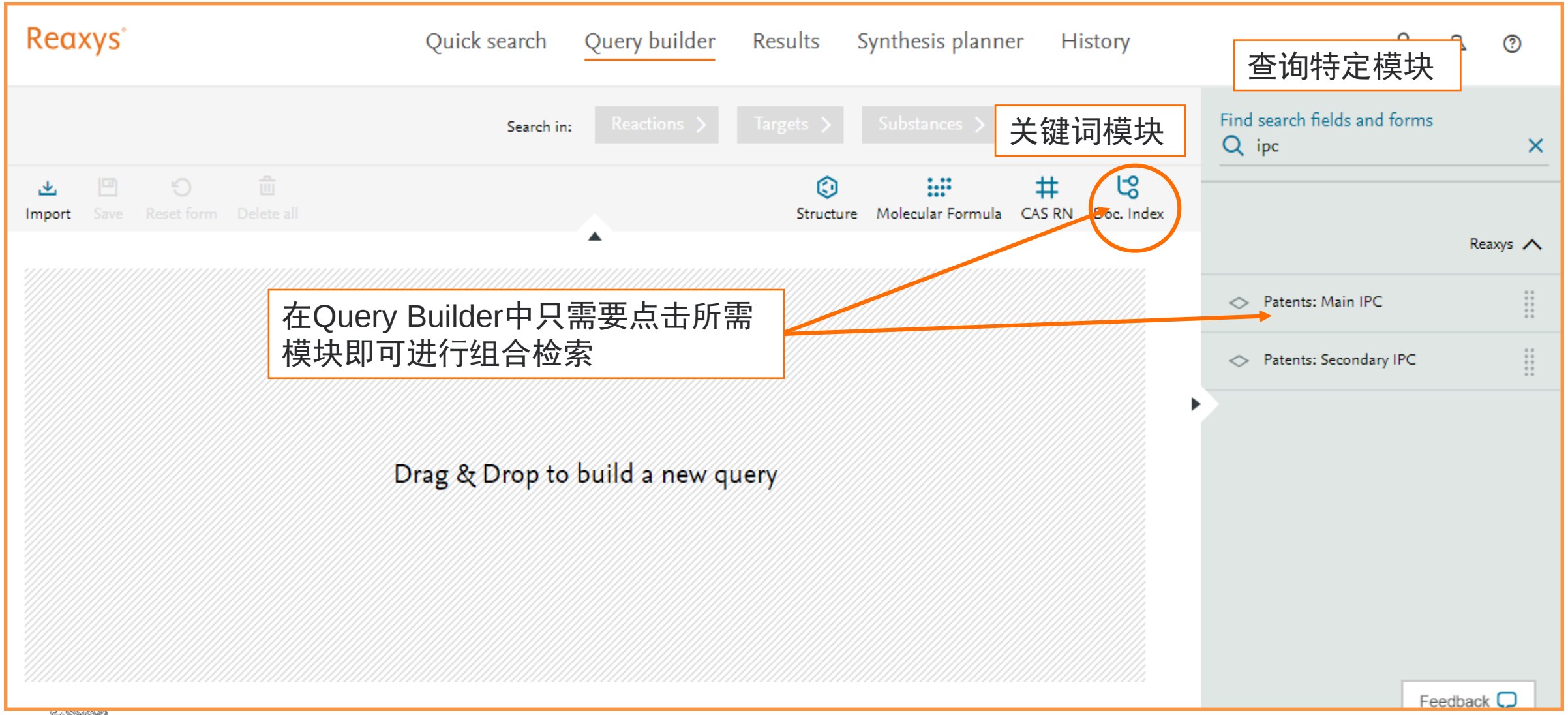
组合模块构建


Reaxys
Quick search
Query builder
Results
Synthesis planner
History
查询特定模块
Search in:
Reactions
Targets
Substances
关键词模块
Find search fields and forms
ipc
Import
Save
Reset form
Delete all
Structure
Molecular Formula
CAS RN
Doc. Index
Reaxys
在Query Builder中只需要点击所需模块即可进行组合检索
Patents: Main IPC
Patents: Secondary IPC
Drag & Drop to build a new query
Feedback

检索结果

2 METHODS AND COMPOSITIONS FOR PREPARING GENETICALLY ENGINEERED CELLS

JUNO THERAPEUTICS, INC.; BONYHADI, Mark L. WO2019/32929, **2019**, A1

Patent Family Members: WO2019/32929 A1

Abstract Claims Front Page Info Full Text

Claims hit: {...of CD28, CD137 (4-1-BB), OX40, or ICOS.42. The method of claim 41, wherein...}

Assignees			Inventors (Authors)
JUNO THERAPEUTICS, INC.; BONYHADI, Mark L.			BONYHADI, Mark L.
Patent No	**Kind Code**	**Publ. Date**	**Application No**
WO2019/32929	A1	2019/02/14	WO2018-US46151
Priority No			**Priority Date**
US2017-543359P			2017/08/09
Patent Classification			
Main IPC	A61K 39/00		
Secondary IPC	C12N 5/0783		

公开日期
授权状况

IPC
分类

Claims

CLAIMS

WHAT IS CLAIMED:

1. A method for genetically engineering
(a) incubating an input composition, un
T cells, wherein the stimulating conditi
or more intracellular signaling domains
(b) introducing a nucleic acid encoding
incubating.
2. A method for genetically engineering
population of T cells comprising naive-
the stimulating conditions comprises th
or more intracellular signaling domains
the incubating the input composition under stimulating conditions is performed prior to, during and/or subsequent to introducing a nucleic acid encoding a
receptor.
3. The method of claim 1 or claim 2, wherein the incubating is carried out for at least 3 days.
4. The method of claim 1 or claim 2, wherein the incubating is carried out for at least 4 days.
5. The method of claim 1 or claim 2, wherein the incubating is carried out for at least 5 days.
6. The method of claim 1 or claim 2, wherein the incubating is carried out for at least 6 days.
7. A method for stimulating T cells, the method comprising:
(a) incubating, under stimulating conditions, an input composition comprising T cells comprising a culture-initiating amount of naive-like T cells or a CD8+
stimulated composition, wherein the stimulating conditions comprise the presence of a stimulatory reagent capable of activating one or more intracellular si
components of a TCR complex and/or one or more intracellular signaling domains of one or more costimulatory molecules, thereby generating a stimulated
(b) introducing into the stimulated cell composition a nucleic acid encoding a genetically engineered recombinant receptor, wherein the method thereby gen
cells expressing the genetically engineered recombinant receptor.

ation of T cells com
ains of one or more
the introducing is
for between 2 and 6
ains of one or more

专利‘Claim’部分的摘取和可索引，对于生物药类专利的检索非常有利。

通常生物药类的专利，不具有结构式，且专利标题和摘要一般会撰写得比较简单，造成了生物药类专利检索的困难

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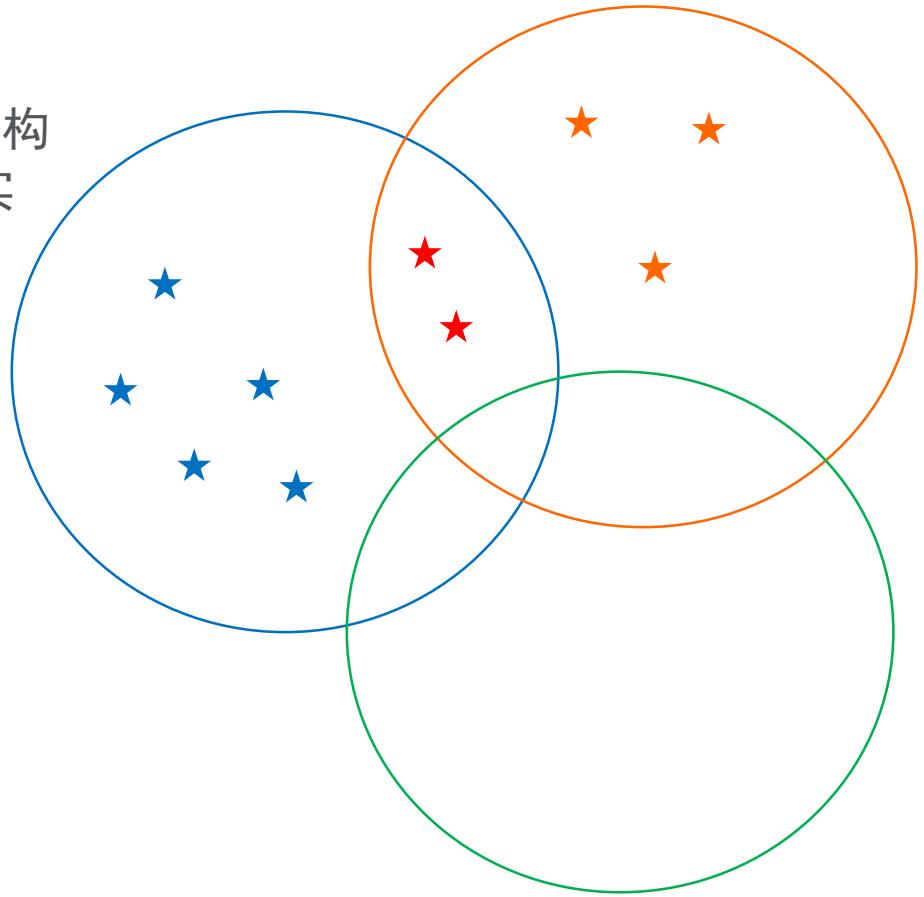
基于全新化合物评估的Markush检索

- Markush检索概览



Markush A结构包含范围及实施例

Markush B结构包含范围及实施例

Markush C结构包含范围，必须保证覆盖范围没有实施例，才有可能被授权

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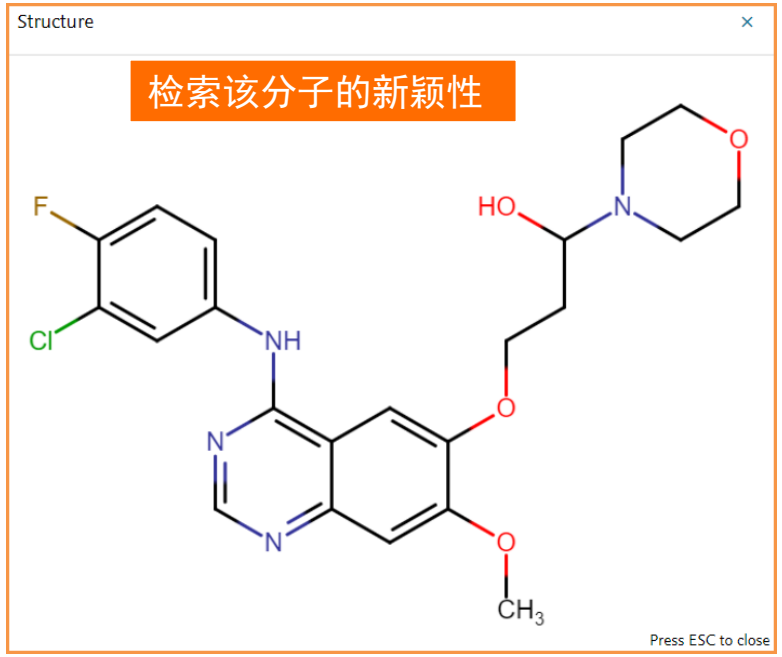
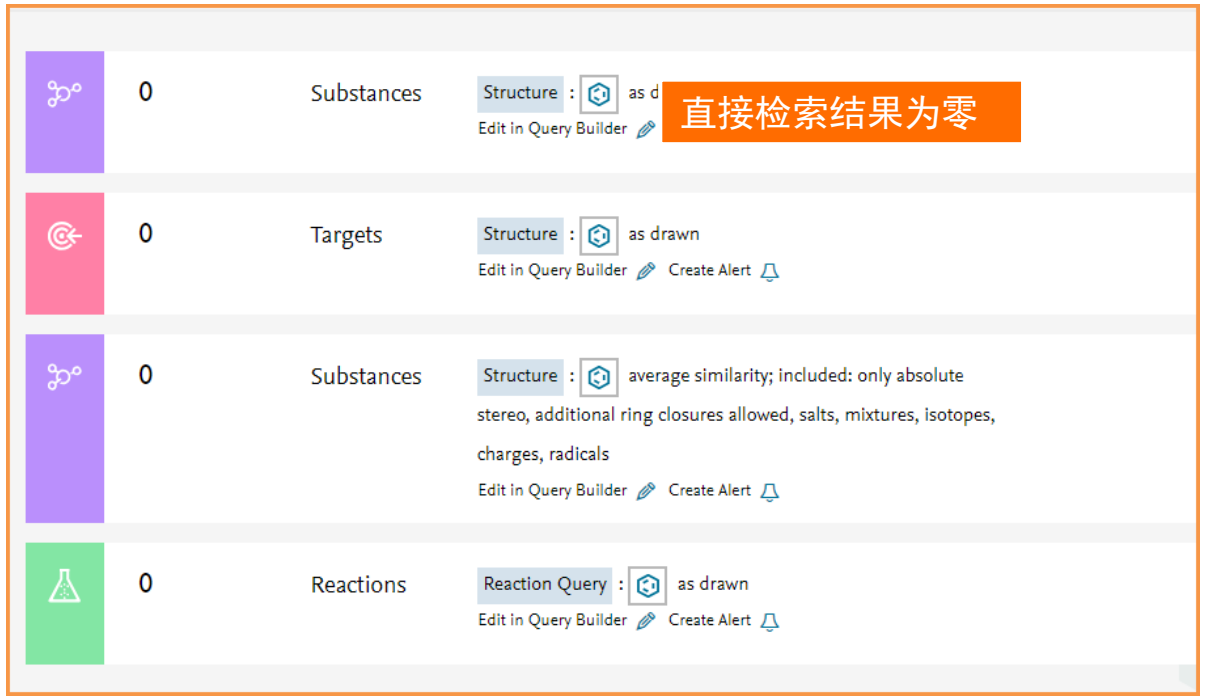
Markush检索的基本模式

- Reaxys数据库中markush检索需要手动分辨结构分子的新颖性





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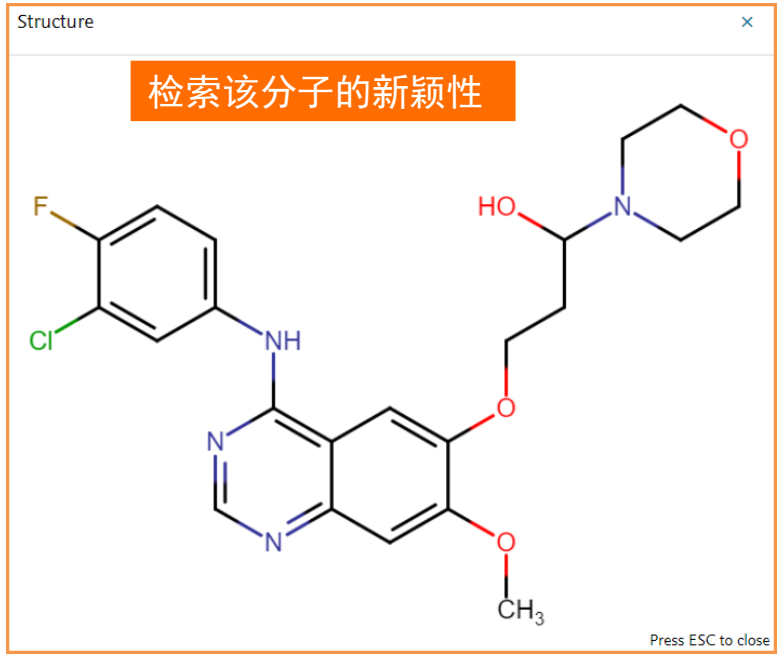
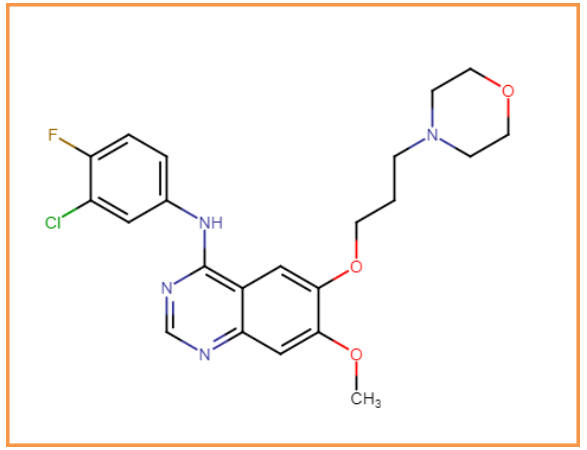
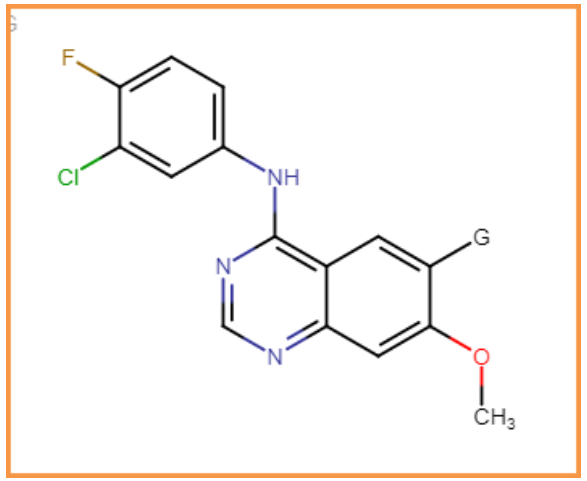
Markush检索的基本模式

- 通过分析之后，可以通过相似已存在结构的markush锁定结果





方法1：相关性最高检索



方法2：限定一定范围的检索

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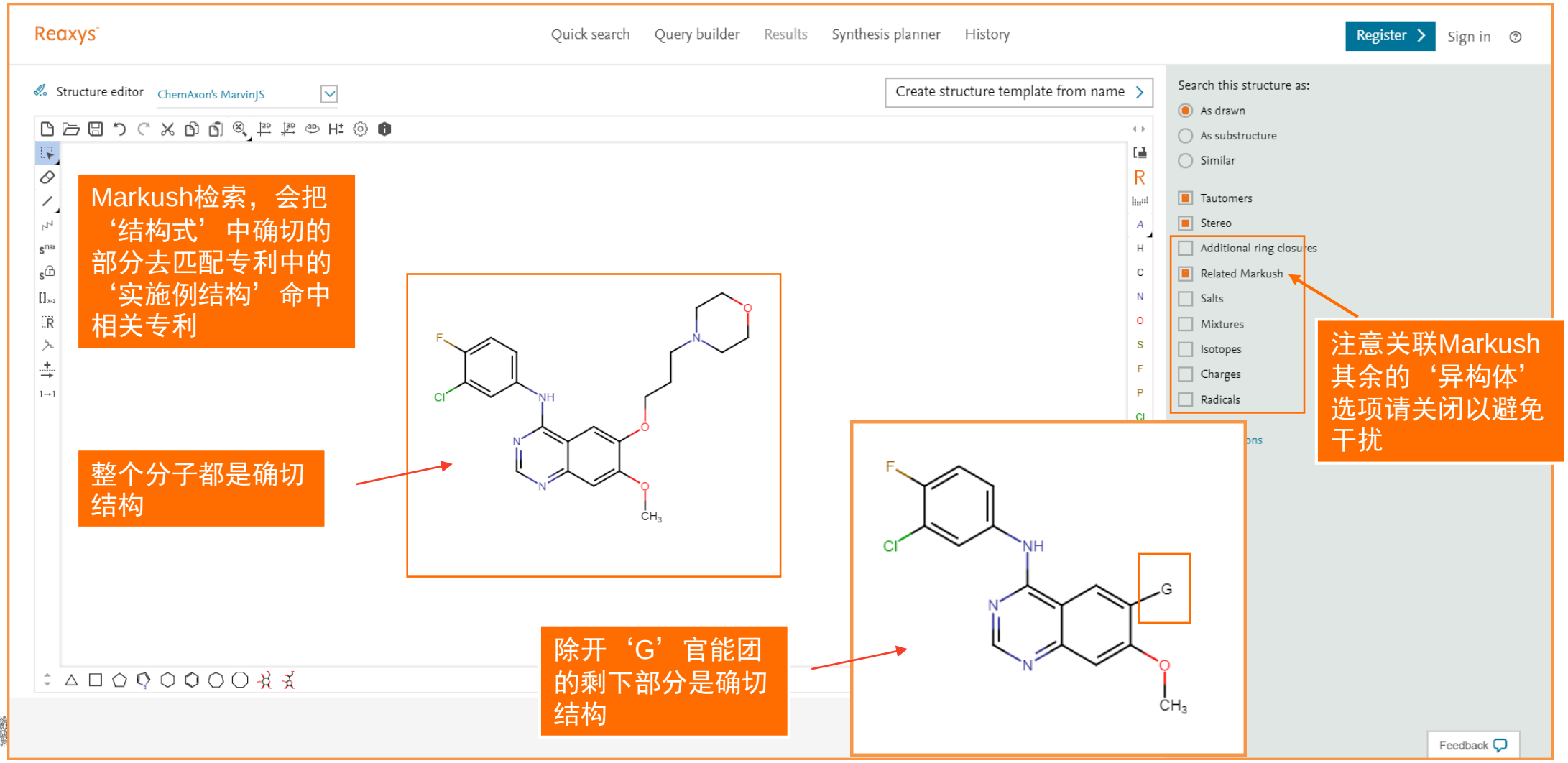
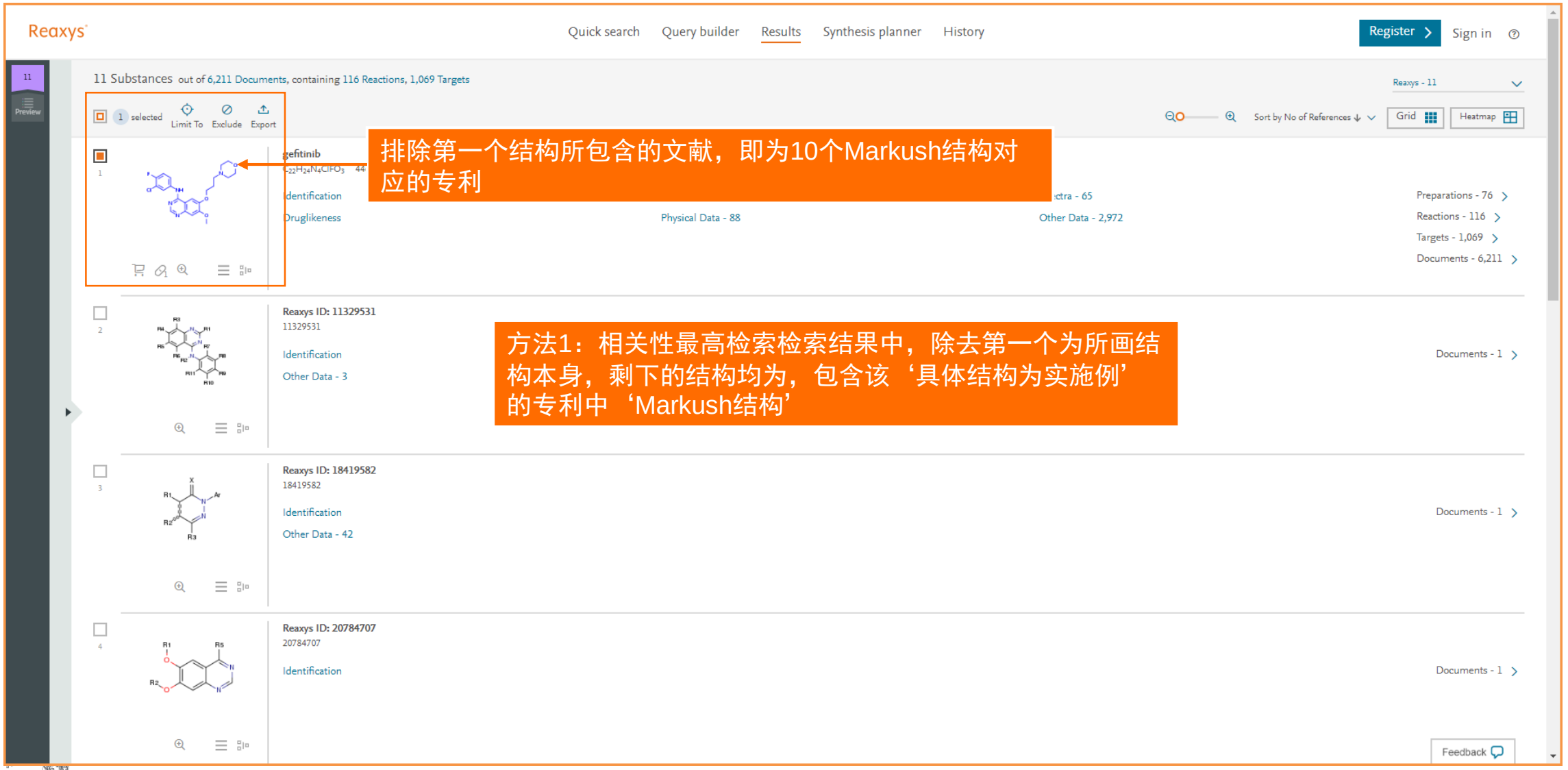
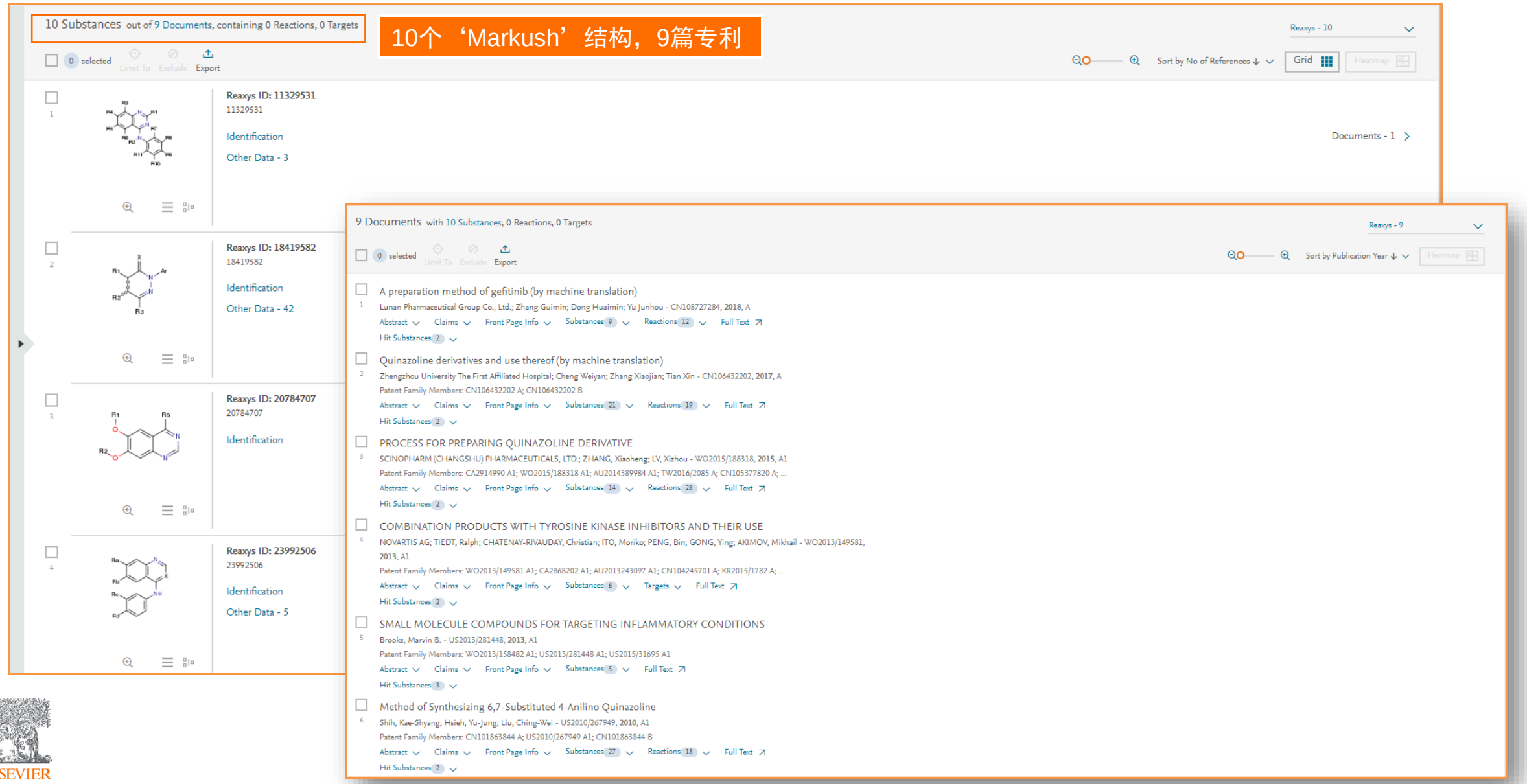
Markush检索的基本模式-方法1：最相关结构检索



Markush检索的基本模式-检索结果



Markush检索的基本模式-检索结果



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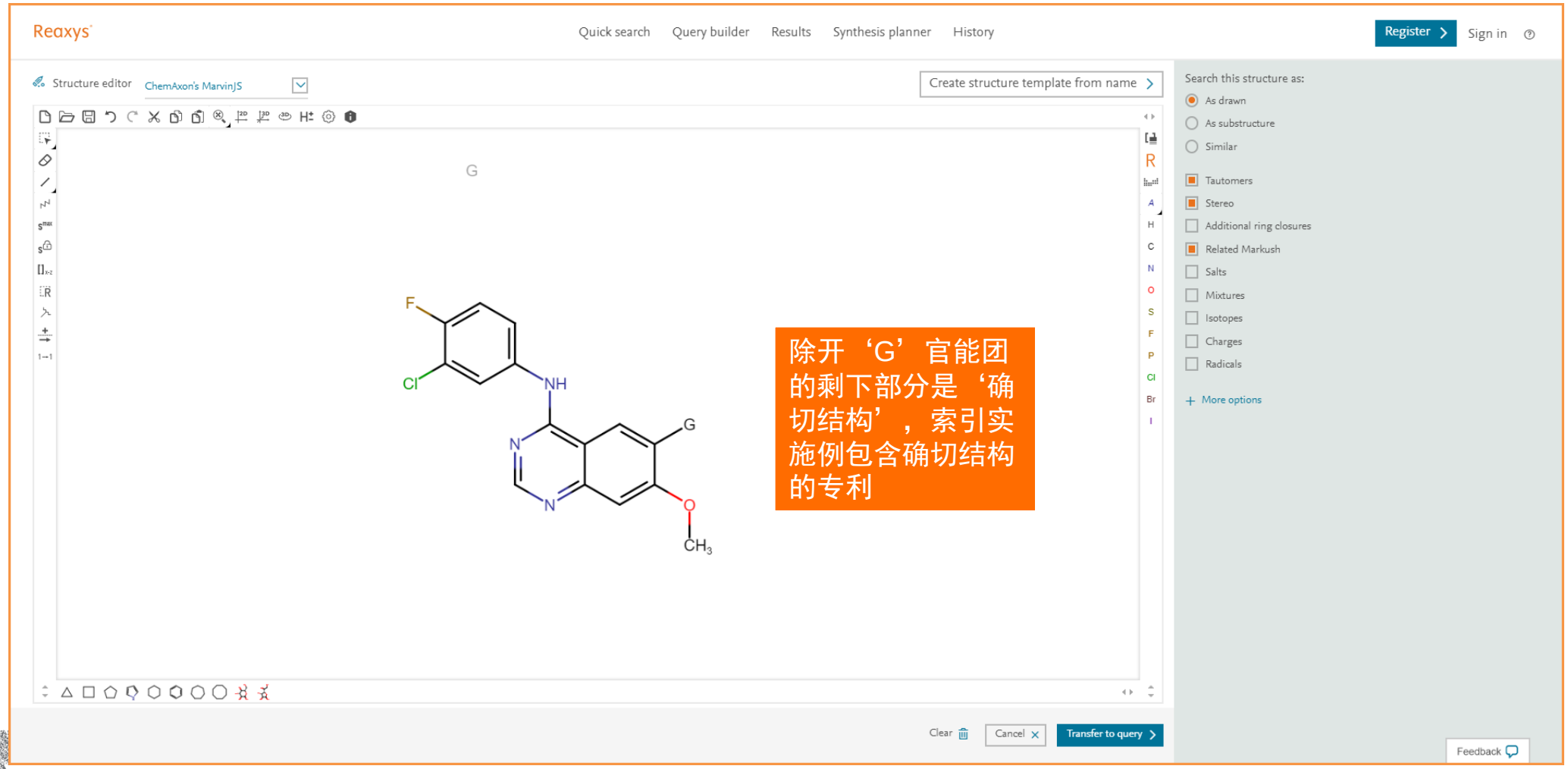
Markush检索的基本模式-方法2：一定范围扩展结构检索

- 需要进一步检索新颖性时，可进行一定范围限定的扩展检索



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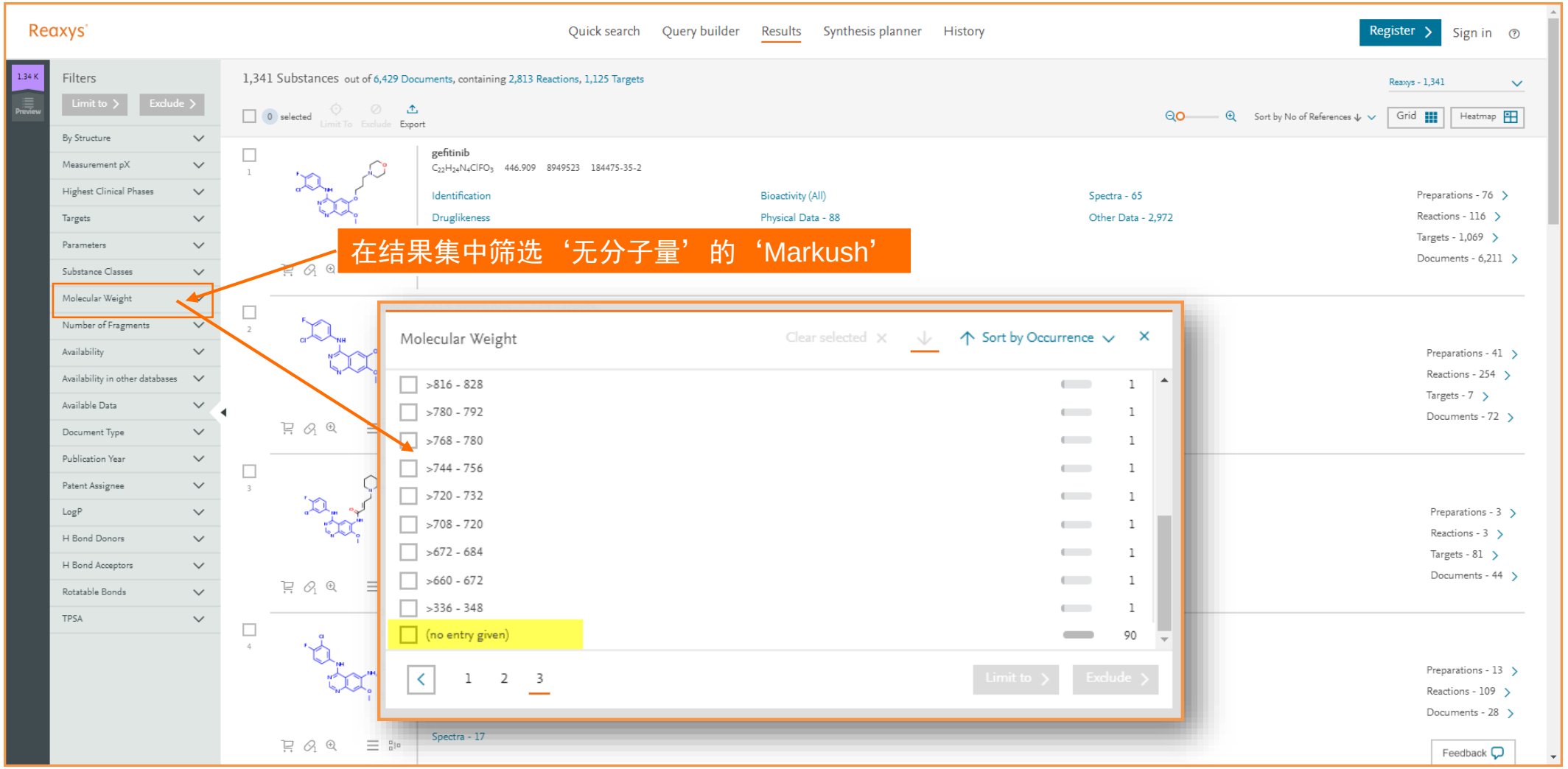
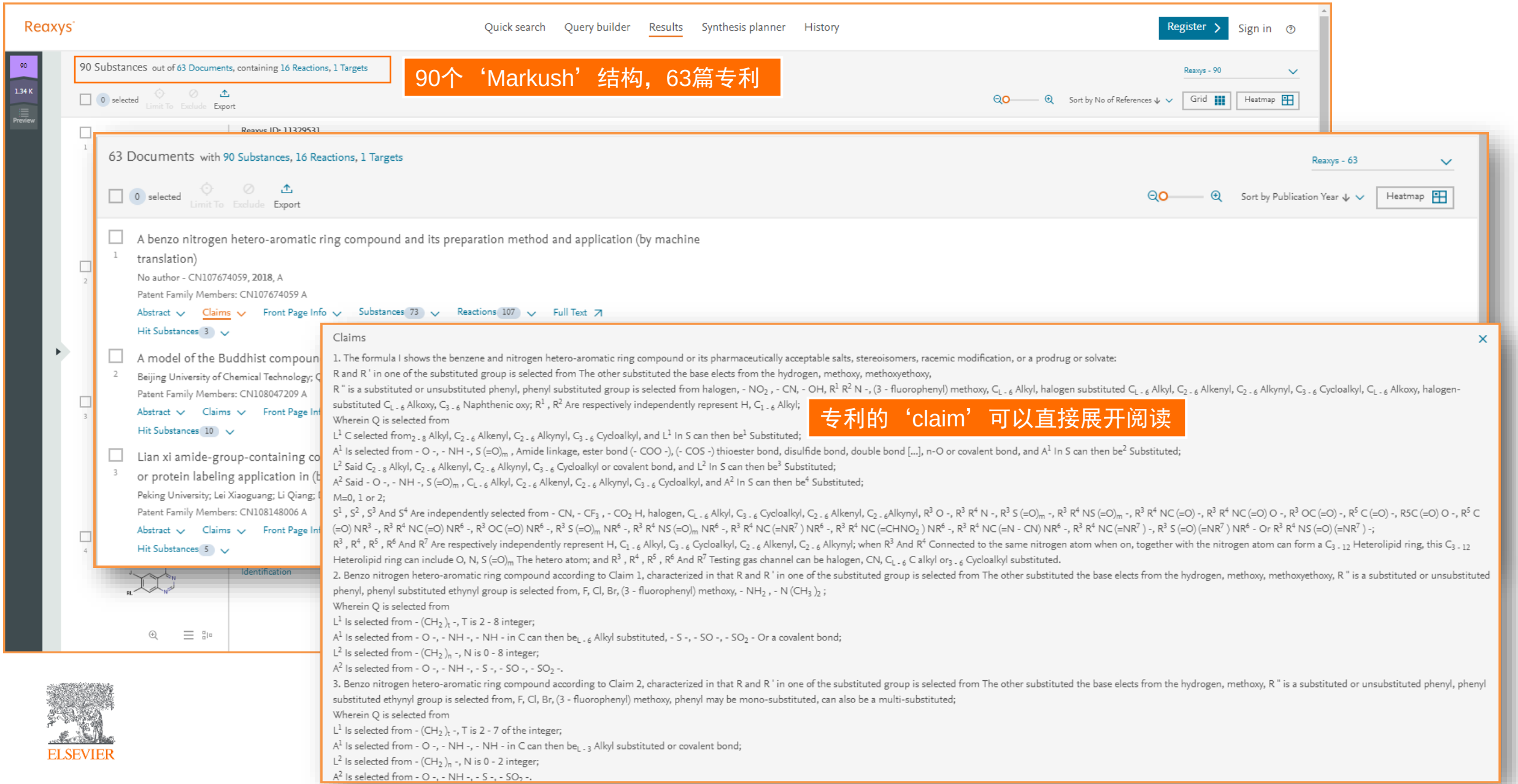
Markush检索的基本模式-检索结果



Markush检索的基本模式-检索结果



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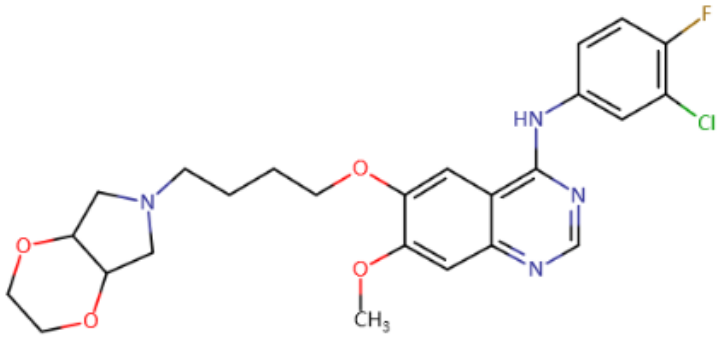
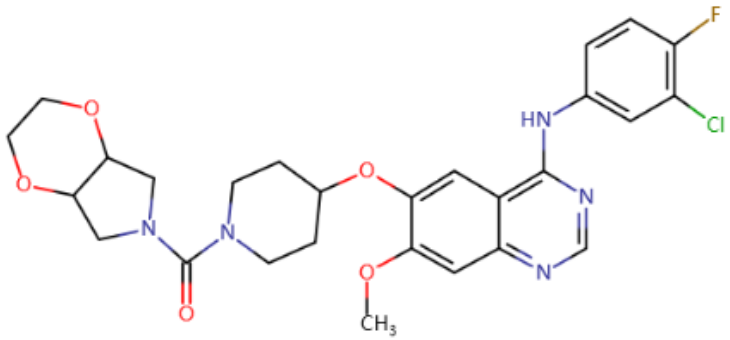
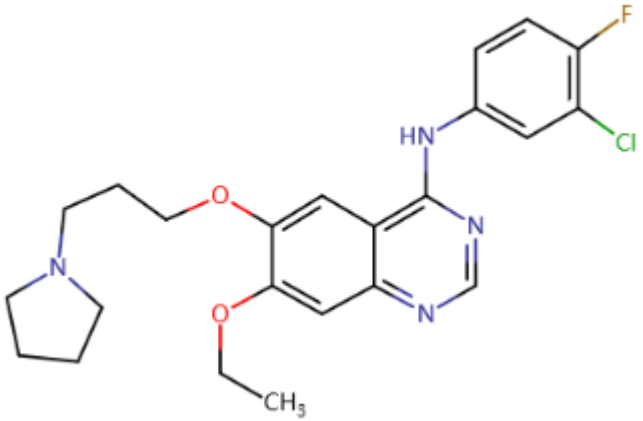
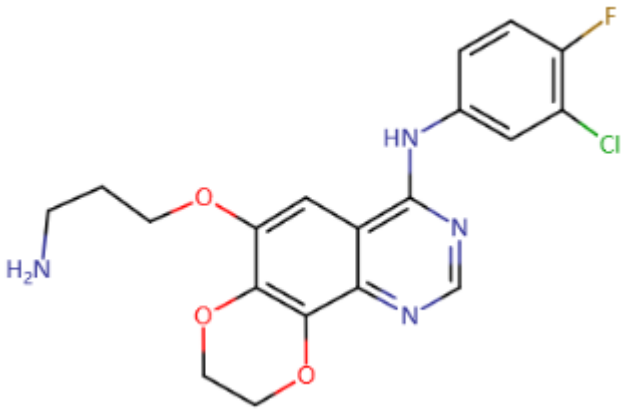
CASE 5：评估以下化合物的可专利性

- 当有多个分子需要同时评估时，可设计Markush结构









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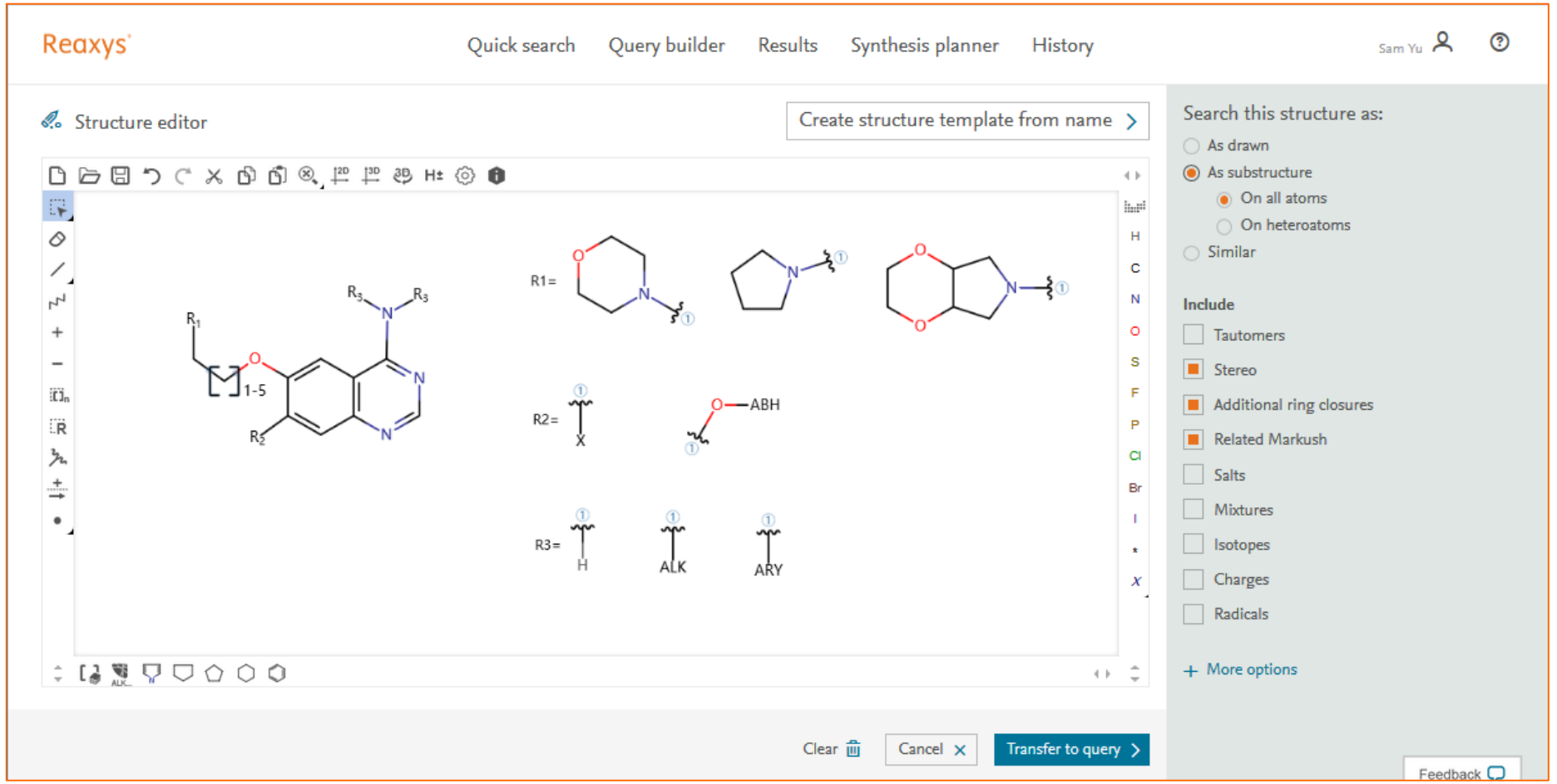
Reaxys中的Markush检索



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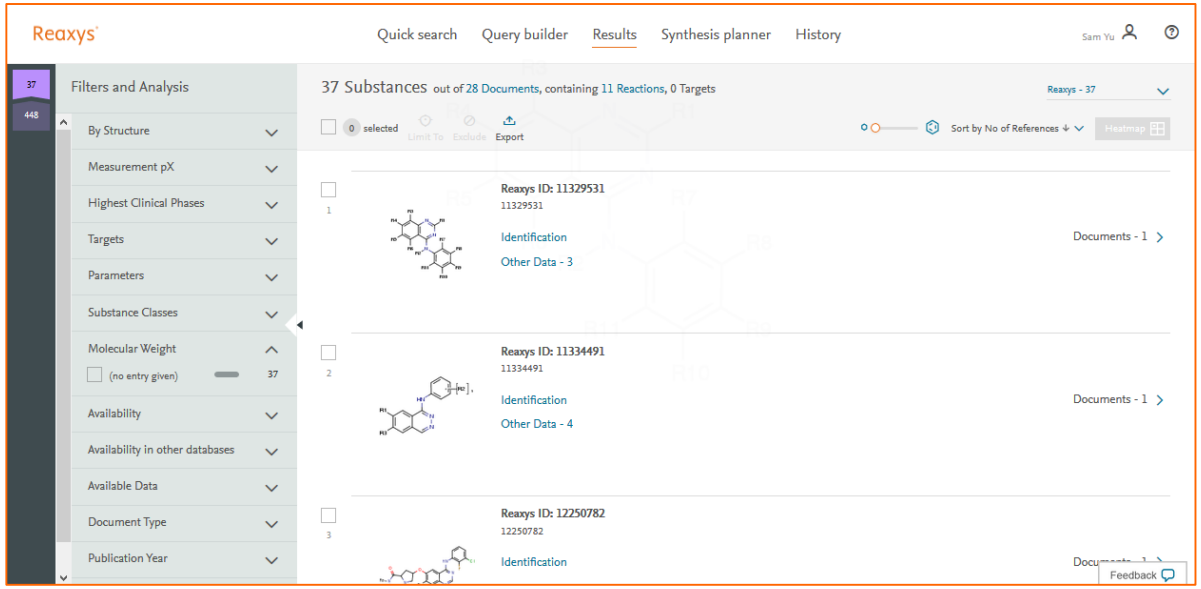
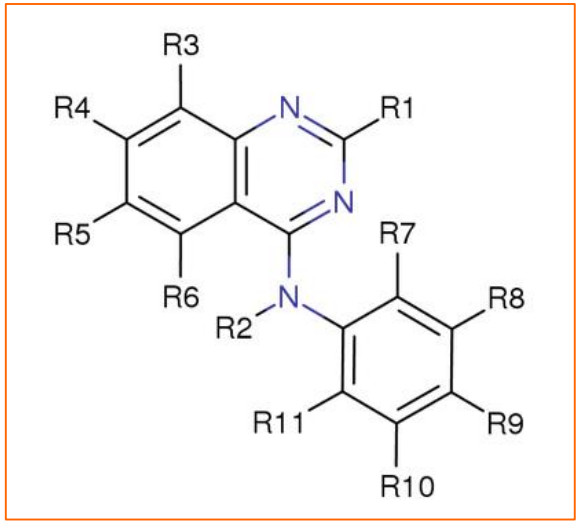
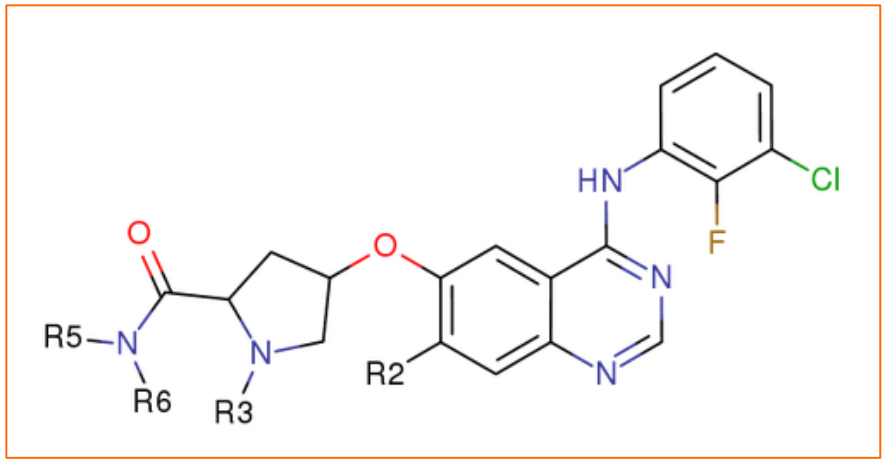
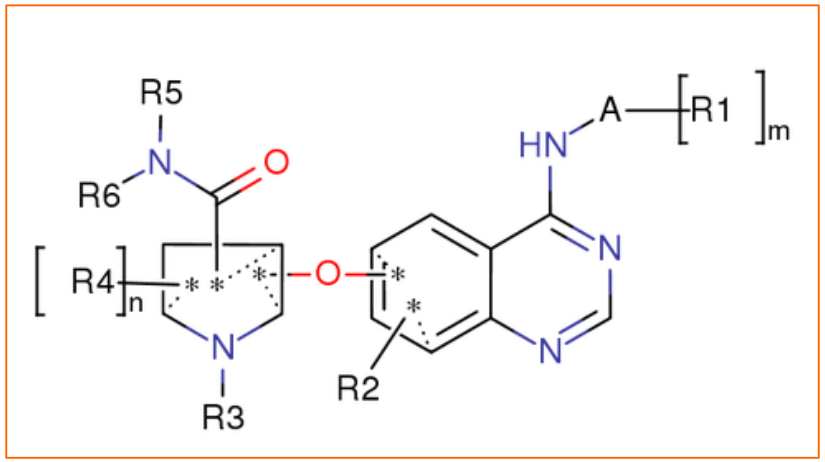
利用分子量筛选，筛出Markush结构









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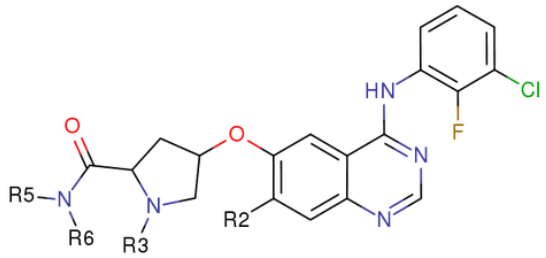
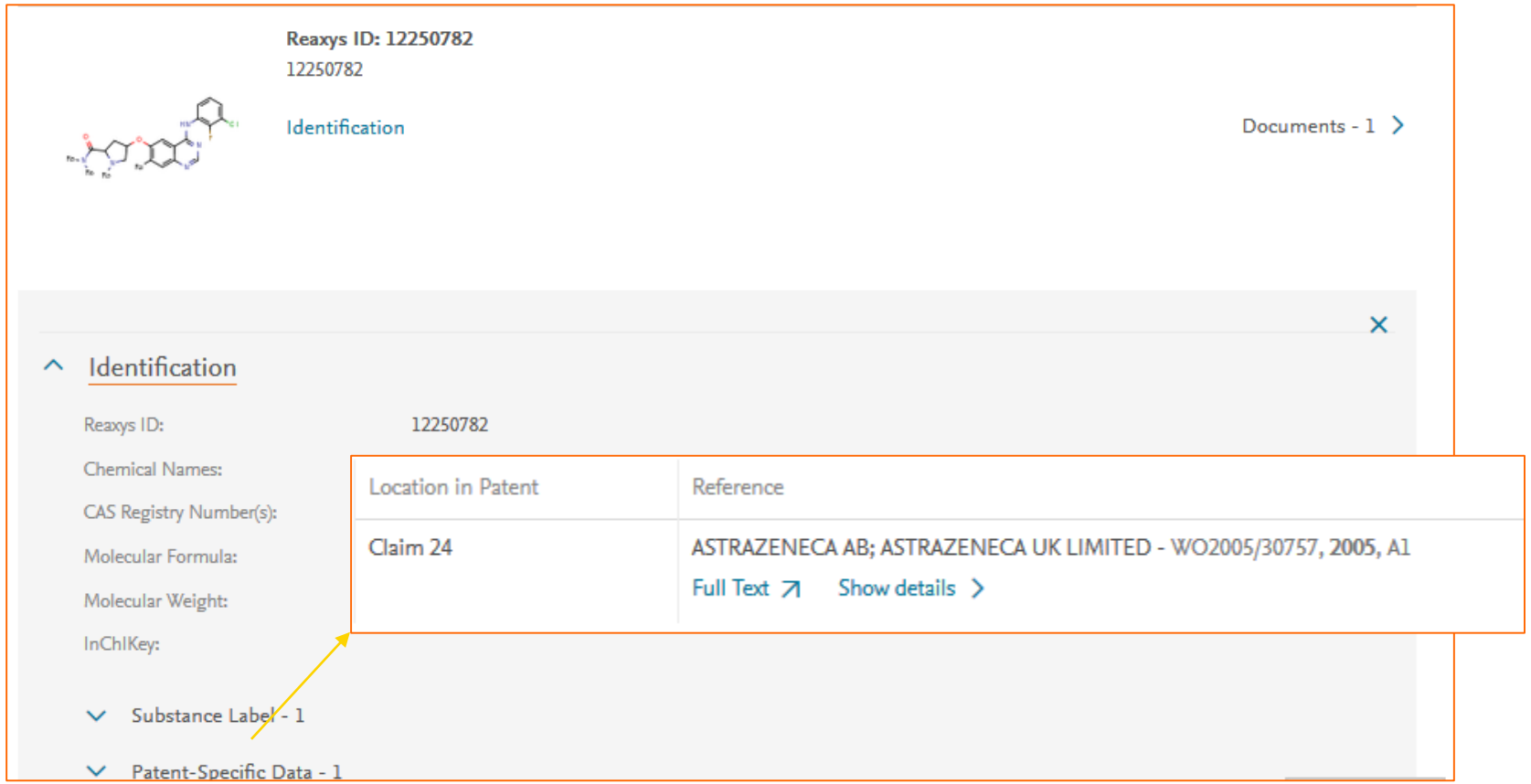
Markush结构的解析



有时候，根据每篇专利的发明情况不同，可能会出现多个markush结构。Reaxys中的Markush标记出该结构在专利Claim中的位置



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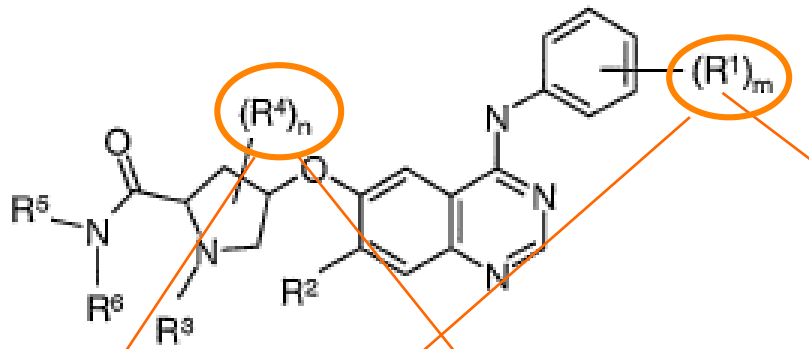
Rx辅助专利中Markush结构的解读

24. A quinazoline derivative according to any one of the preceding claims having a structural sub-formula A2



(A2)

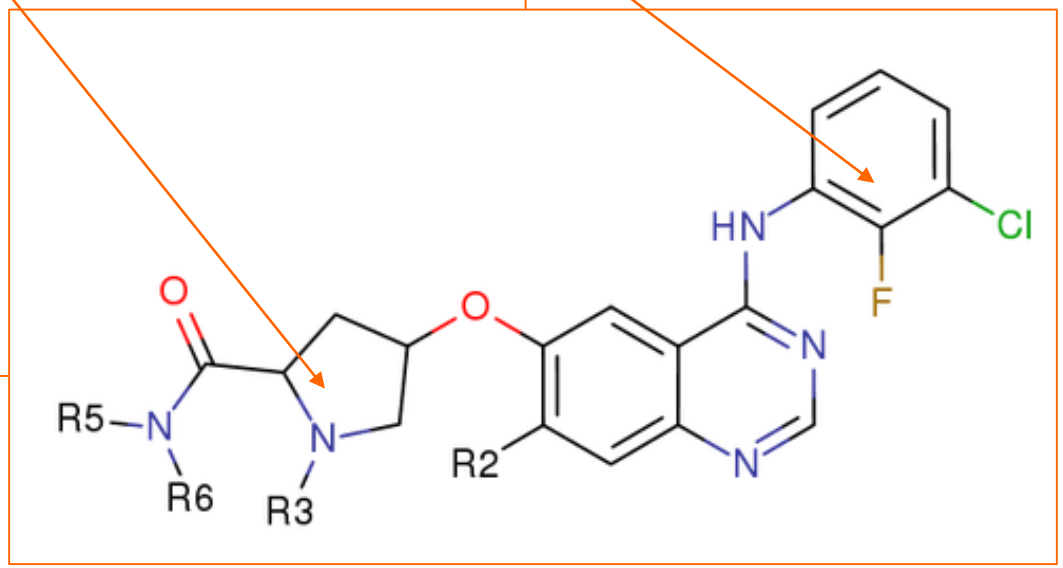
wherein:

m is 2 and R^1 is 2-fluoro and 3-chloro;

R^2 is methoxy;

R^3 is methyl;

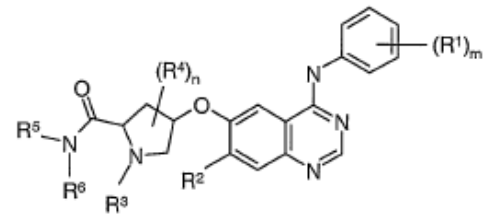
n is 0;



Markush结构查新仅仅是起始，对于重要化合物保护专利，Markush结构的解读便于分析该专利排他性范围到底如何。

专利原文中对该结构的描述

24. A quinazoline derivative according to any one of the preceding claims having a structural sub-formula A2



(A2)

wherein:

m is 2 and R^1 is 2-fluoro and 3-chloro;

R^2 is methoxy;

R^3 is methyl;

n is 0;

专利原文用文字进行结构的描述，较为复杂，不易阅读

and R^5 is hydrogen or (1-6C)alkyl and R^6 is selected from substituted-(1-6C)alkyl (wherein substituted-(1-6C)alkyl is (1-6C)alkyl substituted by 1, 2 or 3 substituents independently selected from (1-6C)alkoxycarbonyl, carbamoyl, (2-6C)alkanoylamino, and oxo or a (1-6C)alkoxycarbonyl together with a hydroxy group), (1-6C)alkoxy, (1-6C)alkylsulfonyl, (3-7)heterocyclyl (wherein the heterocyclyl is carbon linked), heteroaryl, (3-7)heterocyclyl(1-6C)alkyl (wherein the heterocyclyl is carbon linked to the (1-6C)alkyl moiety) and heteroaryl(1-6C)alkyl,

and wherein any heteroaryl or (3-7)heterocyclyl group within R^6 is optionally substituted (on any available carbon atoms) by 1, 2 or 3 substituents independently selected from halogeno, (1-6C)alkyl, hydroxy(1-6C)alkyl, (1-6C)alkoxycarbonyl, carbamoyl, (2-6C)alkanoylamino and hydroxy and/or optionally a substituent selected from oxo, cyano, nitro and (1-4C)alkoxy,

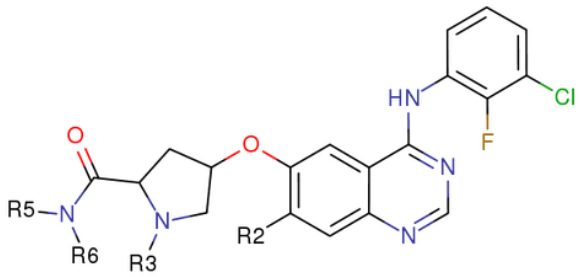
and wherein any heteroaryl or heterocyclyl group within R^6 is optionally substituted on any available ring nitrogen (provided the ring is not thereby quaternised) by (1-4C)alkyl or (2-4C)alkanoyl, or

R^5 and R^6 together with the nitrogen atom to which they are attached form a 4, 5 or 6 membered ring which contains one or two nitrogen atoms as the only heteroatoms present in the ring and which is optionally and which is substituted on an available ring carbon atom by 1 or 2 substituents independently selected from carbamoyl and (1-3C)alkylenedioxy.

25. A quinazoline derivative according to claim 24, wherein R^6 is selected from (3-7)heterocyclyl (wherein the heterocyclyl is carbon linked), heteroaryl, (3-7)heterocyclyl(1-6C)alkyl (wherein the heterocyclyl is carbon linked to the (1-6C)alkyl moiety) and heteroaryl(1-6C)alkyl,

and wherein any heteroaryl or (3-7)heterocyclyl group within R^6 is optionally substituted (on

Reaxys将结构翻译成图表



图表形式的解读更容易帮助理解结构保护的范围

Label	Value	Size	Attributes	Substituted by	Frequency
R2	methoxy				
R3	methyl				
R5	hydrogen				
R6	alkyl	1-6C		$s8	0-3
	hydrogen				
	alkyl	1-6C			
	alkenyl	2-8C			
	alkynyl	2-8C			
	alkoxy	1-6C			
	cycloalkyl	3-7C			
	alkylsulfonyl	1-6C			
	heterocyclyl			$s9	0-?
	heteroaryl				
	$*cyclalk37$*alk13				
	$*hetar$*alk13				
	$*het$*alk13				
$s1	alkyl	1-4C			

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内容

- Elsevier 生命科学解决方案
  1. Reaxys对信息的提炼介绍，以及信息检索基础技巧
  2. Reaxys专利检索策略
  3. RMC辅助药物分子设计研发决策
  4. PharmaPendium辅助药物临床研究
- 总结

RMC辅助药物分子设计研发决策

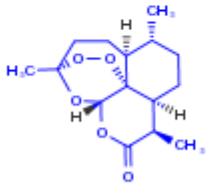
- 对文献数据的处理
- 特定信息检索功能
- 辅助药物分子改性

查看具体的生物数据

231 Substances out of 2,394 Documents, containing 1,199 Reactions, 65 Targets

0 Limit To Exclude Export

1



Reaxys ID: 4194670

$C_{15}H_{22}O_5$ 282.337 4194670 63968-64-9

Identification

Druglikeness

Bioactivity (All)

Physical Data - 375

Spectra - 102

Bioactivity (All)

- In vitro: Efficacy - 1,358
- In vivo: Animal Model - 135
- Metabolism - 160
- Pharmacokinetic - 98
- Toxicity/Safety Pharmacology - 343

pX	Parameter	Value (qual)	Value (quant)	Unit	Biological Species	Population	Route of administration	Dose	Dosing regimen	Reference
	metabolic stability	active			mouse		administration	mg/kg		Acquaah-Mensah, George K.; Rich, Stephen M. - Journal of Ethnopharmacology, **2014**, vol. 153, # 3, p. 732 - 736 Full Text Cited 15 times Details Abstract
	Vd ss/F		1363	L	Human	Healthy	oral administration	500 mg	Single	Simonsson, Ulrika S. H.; Jansson, Britt; Hai, Trinh Ngoc; Huong, Dinh Xuan; Tybring, Gunnel; Ashton, Michael - Clinical Pharmacology and Therapeutics, **2003**, vol. 74, # 1, p. 32 - 43 Full Text Cited 68 times Details Abstract
	Vd ss/F		967	L	Human	Healthy	oral administration	500 mg	Single	Simonsson, Ulrika S. H.; Jansson, Britt; Hai, Trinh Ngoc; Huong, Dinh Xuan; Tybring, Gunnel; Ashton, Michael - Clinical Pharmacology and Therapeutics, **2003**, vol. 74, # 1, p. 32 - 43 Full Text Cited 68 times Details Abstract
	AUC		1696	ng.h/mL	Human	Healthy	oral administration	500 mg	Single	Simonsson, Ulrika S. H.; Jansson, Britt; Hai, Trinh Ngoc; Huong, Dinh Xuan; Tybring, Gunnel; Ashton, Michael - Clinical Pharmacology and Therapeutics, **2003**, vol. 74, # 1, p. 32 - 43 Full Text Cited 68 times Details Abstract

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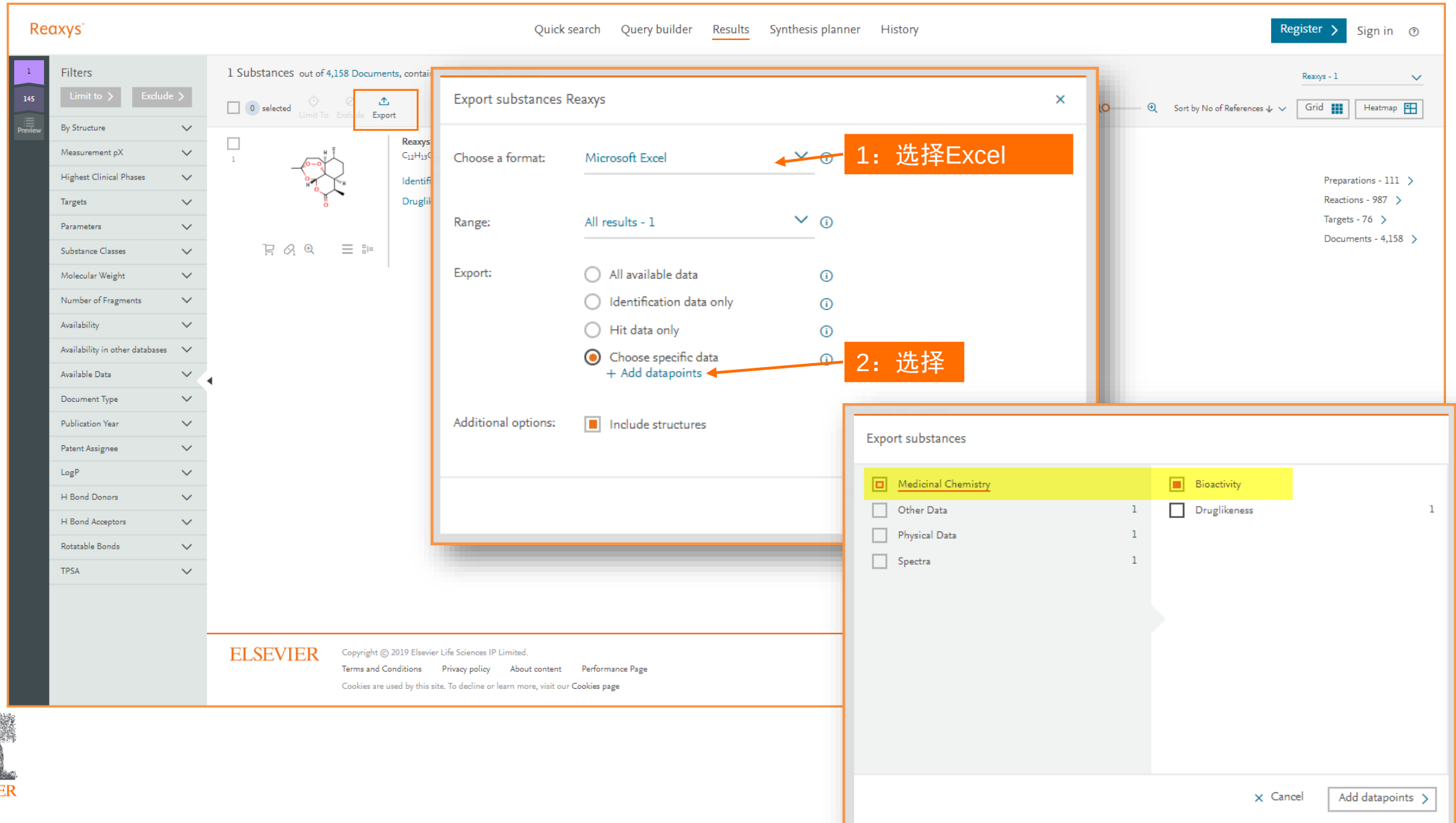
单个化合物全部生物活性的导出



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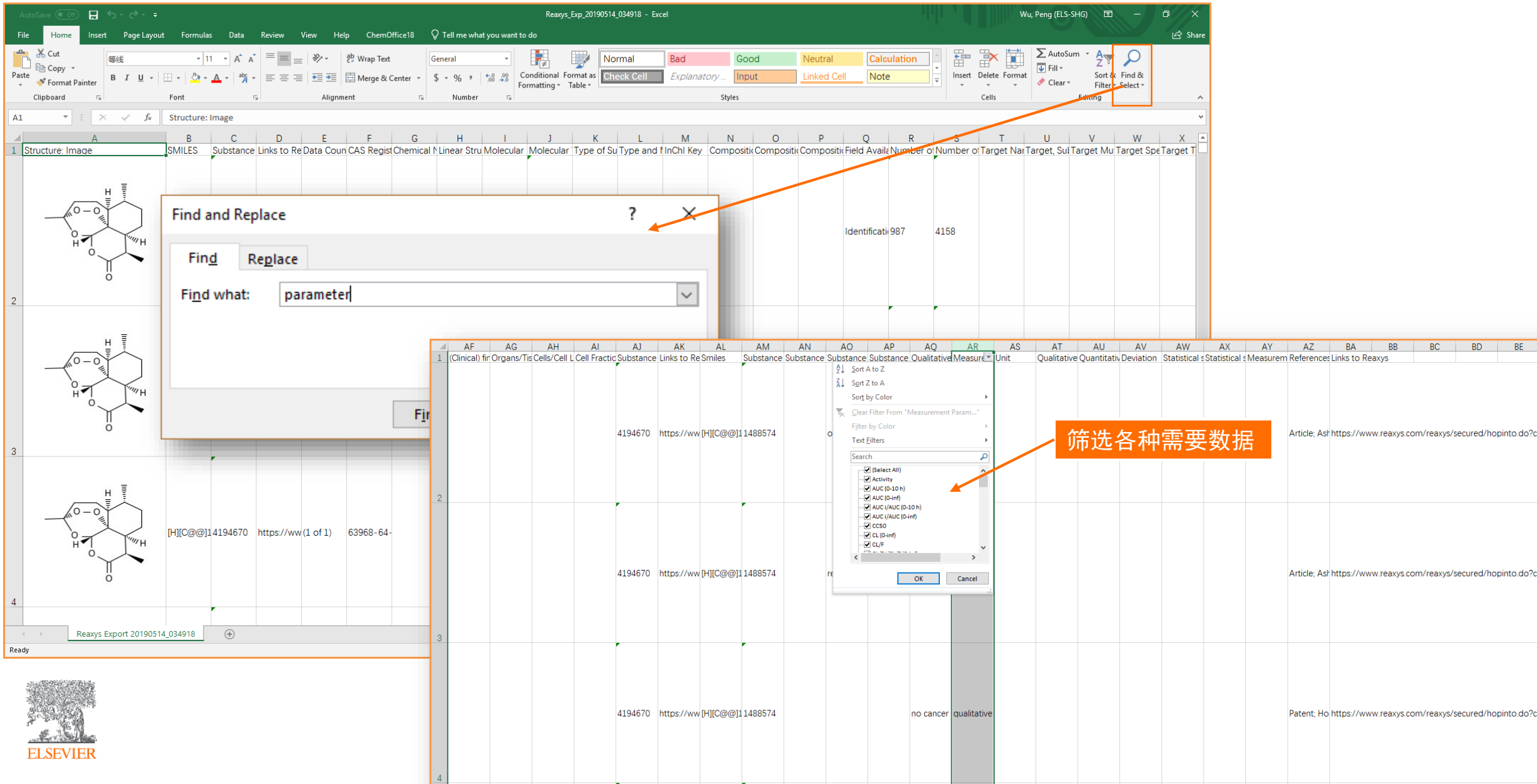
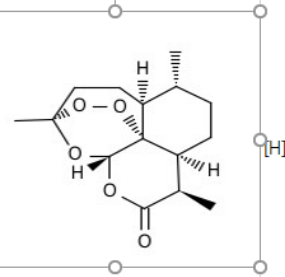
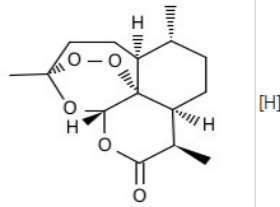
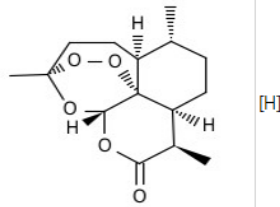
导出整理excel表格



ELSEVIER

导出整理excel表格

	A	B	C	D	E	F	G	H	I	J	K	L
1	Structure: Image	SMILES	CAS Regist	Molecular	Molecular	Measure	Unit	Quantitativ	Deviation	Measurem	References	Links to Reaxys
70		[H][C@@]1	63968-64-	C15H22O5	282.337	EC50	muM	5.38	3.66000	5.27	Article; Per	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=6601927&database=RX&origin=ReaxysOutput&ln=
233		[H][C@@]1	63968-64-	C15H22O5	282.337	AUC (0-10	ng.h/mL	1899			Article; Sim	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=6540097&database=RX&origin=ReaxysOutput&ln=
234		[H][C@@]1	63968-64-	C15H22O5	282.337	AUC (0-inf	ng.h/mL	285			Article; Sim	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=6540097&database=RX&origin=ReaxysOutput&ln=

快速删除不需要列之后得到的数据表格

Reaxys Export 20190514_034918

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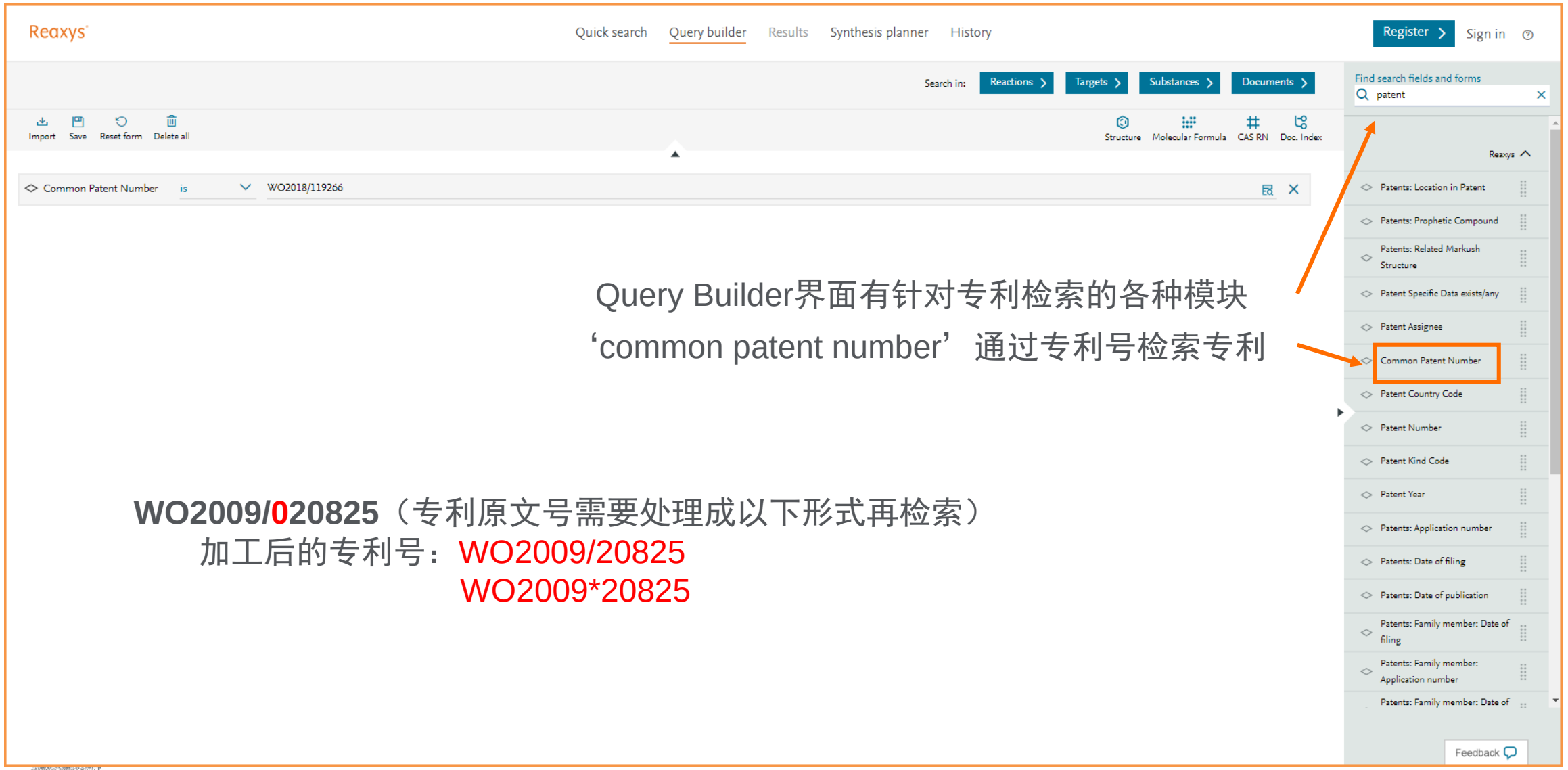
RMC-针对专利数据的快速导出



Query Builder界面有针对专利检索的各种模块

‘common patent number’ 通过专利号检索专利

WO2009/020825（专利原文号需要处理成以下形式再检索）

加工后的专利号：WO2009/20825

WO2009*20825

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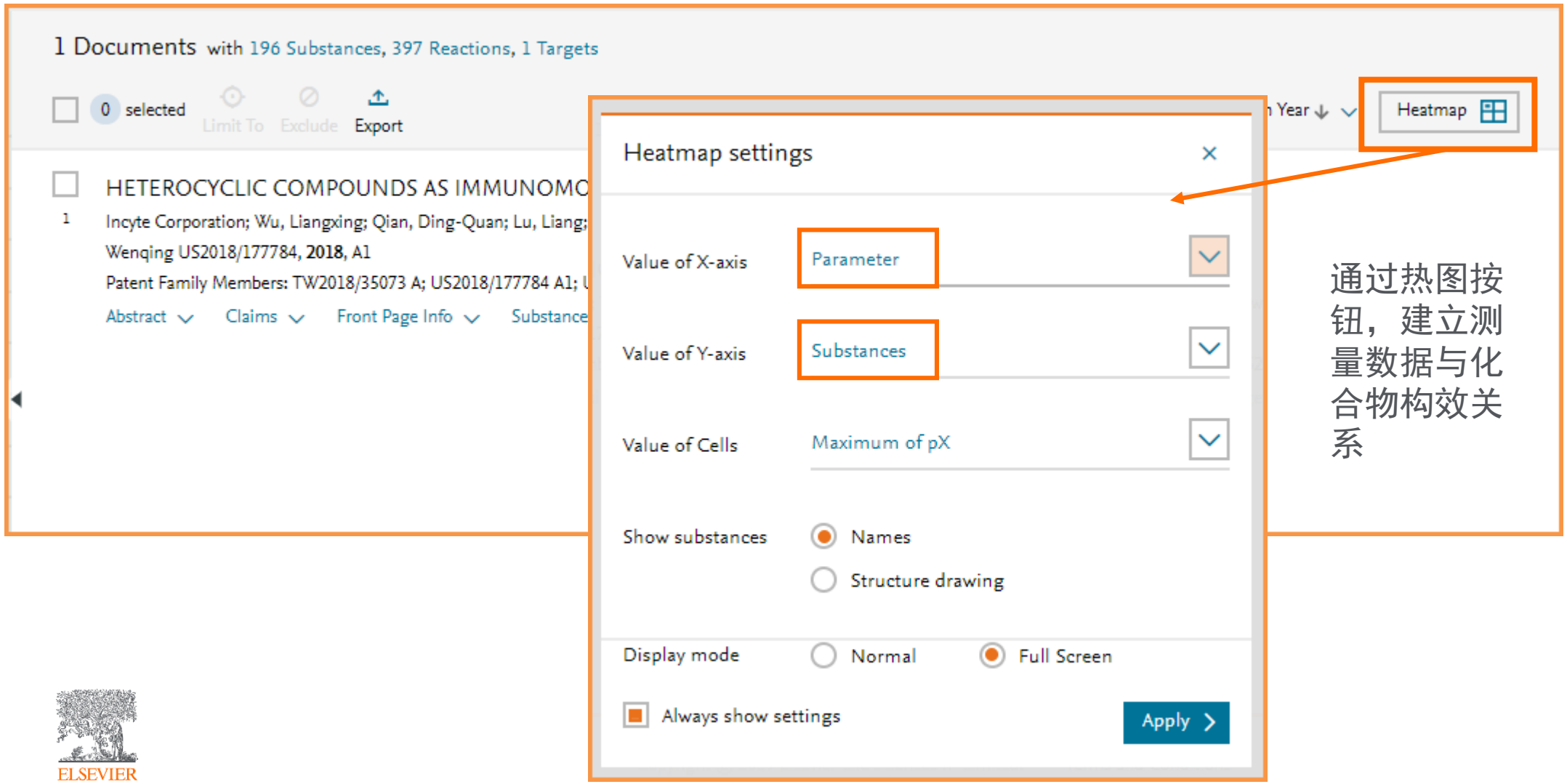
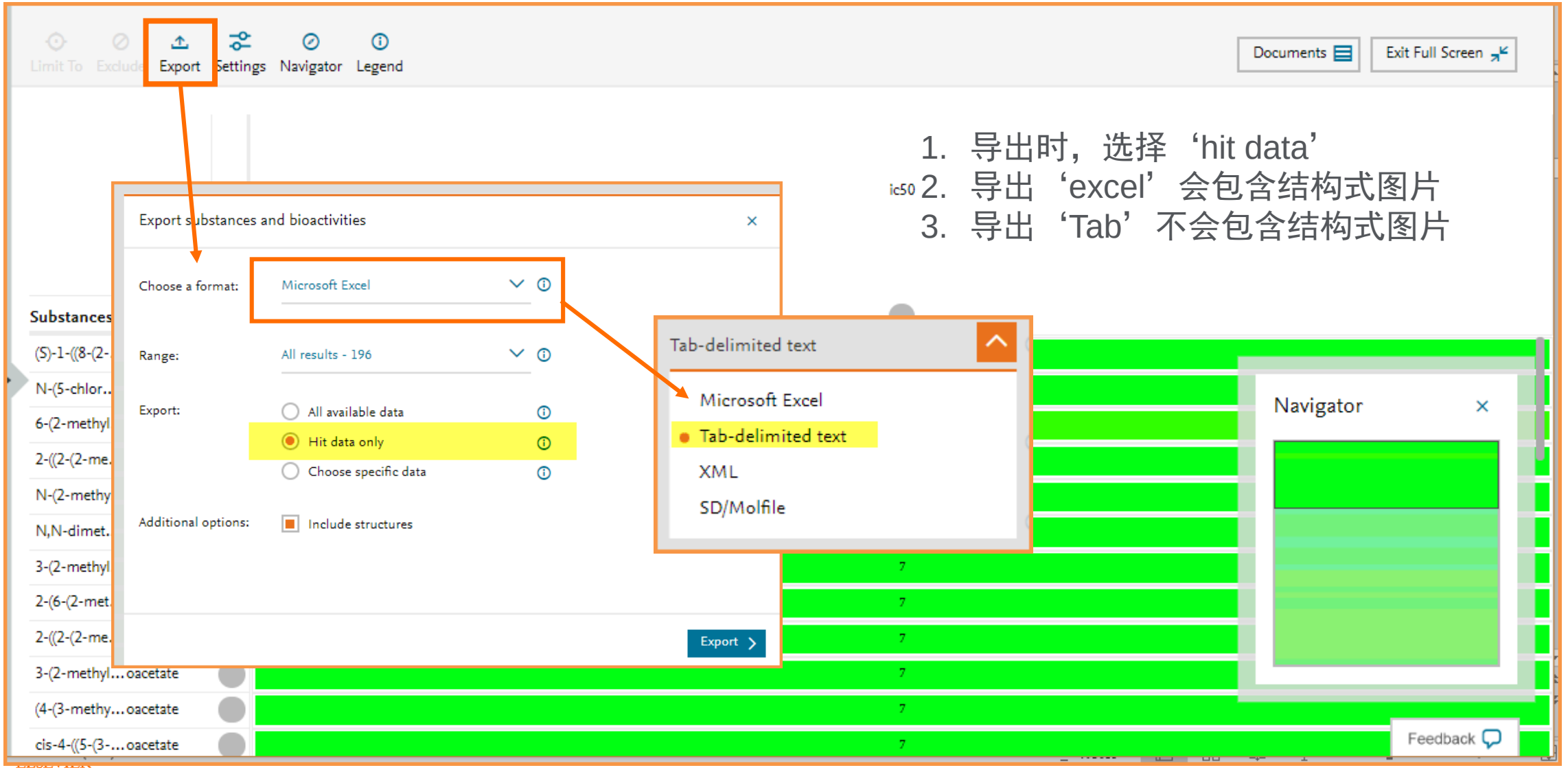
快速摘取专利中的生物活性数据

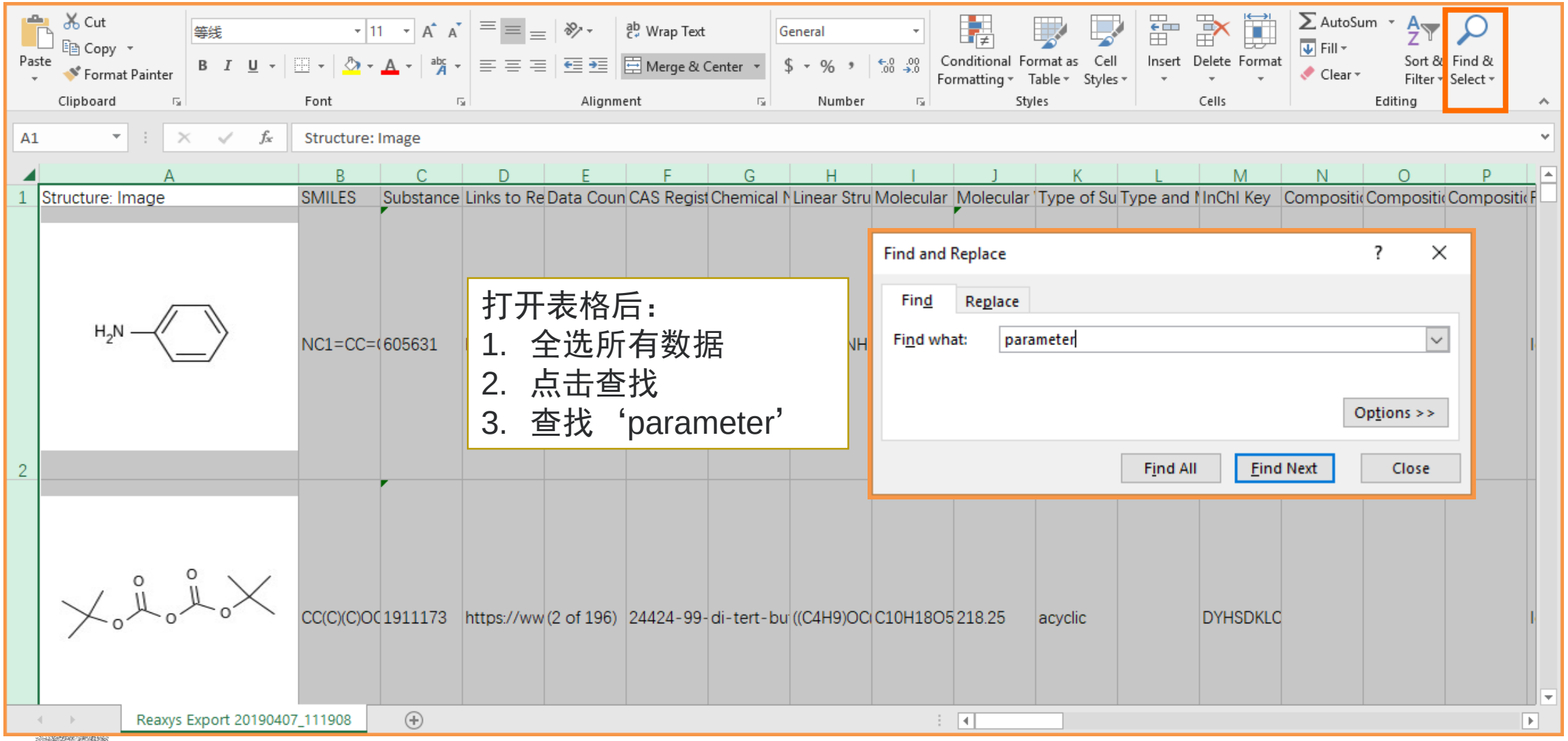


通过热图按钮，建立测量数据与化合物构效关系

导出该篇专利的信息

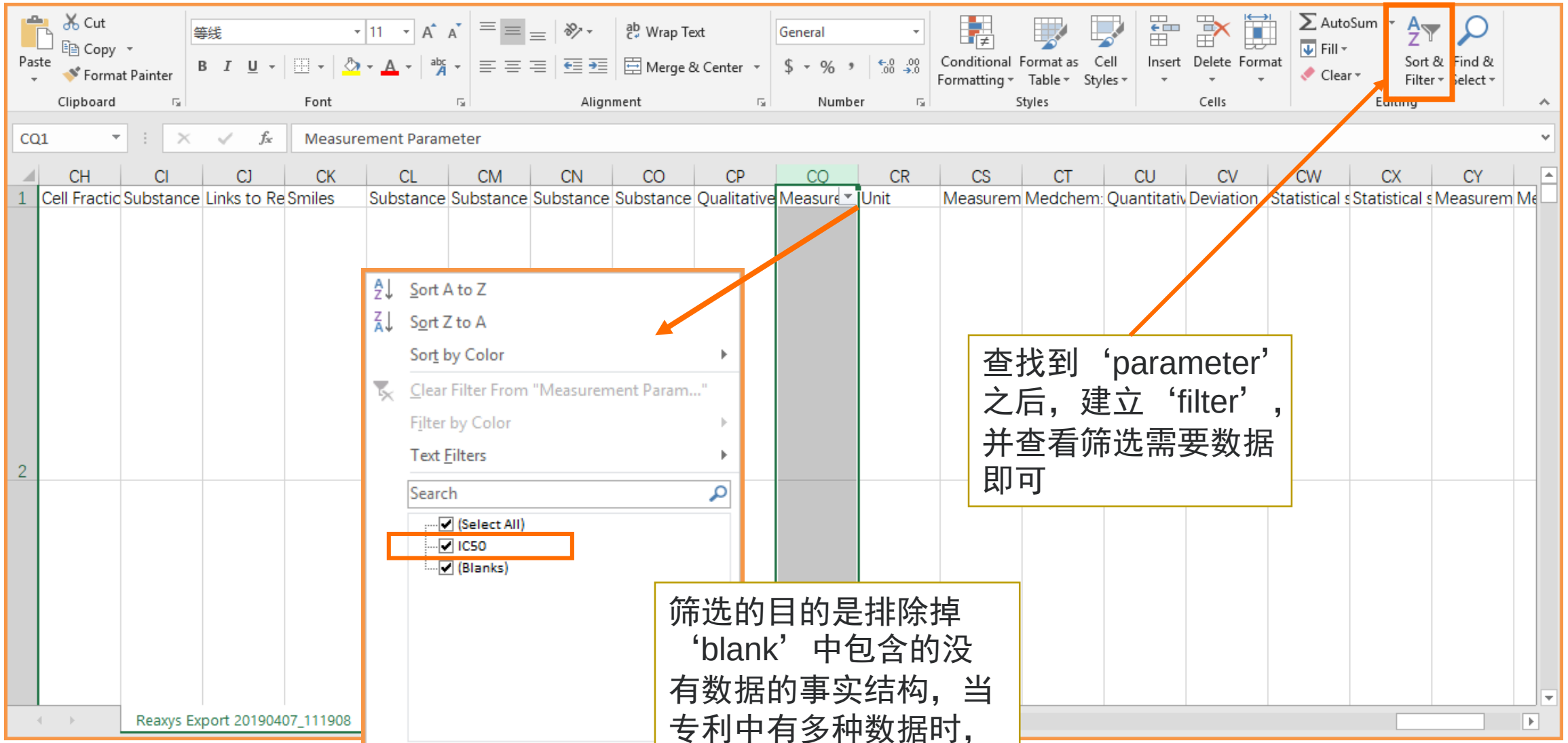

Limit To
Exclude
Export
Settings
Navigator
Legend
Documents
Exit Full Screen
1. 导出时，选择‘hit data’
2. 导出‘excel’会包含结构式图片
3. 导出‘Tab’不会包含结构式图片
Export substances and bioactivities
Choose a format:
Microsoft Excel
Range:
All results - 196
Export:
All available data
Hit data only
Choose specific data
Additional options:
Include structures
Export
Tab-delimited text
Microsoft Excel
Tab-delimited text
XML
SD/Molfile
Navigator
Substances
(S)-1-((8-(2-
N-(5-chlor...
6-(2-methyl
2-((2-(2-me...
N-(2-methy
N,N-dimet...
3-(2-methyl
2-(6-(2-met...
2-((2-(2-me...
3-(2-methyl...oacetate
(4-(3-methy...oacetate
cis-4-((5-(3-...oacetate
Feedback

简单整理Excel表格即可规整数据



ELSEVIER

简单整理Excel表格即可规整数据



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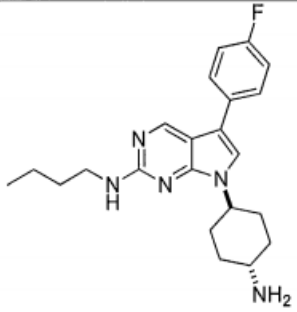
整理结果

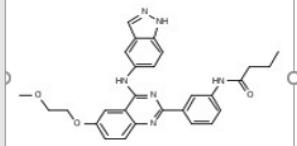
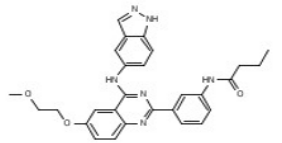
‘SMLES’(可转化为结构)，数据类型，单位，数值，原文，原文连接

	A	B	C	D	E	F	H	I	J	K	L	M	N	O	P
1	Structure	Bioassay Category	Measu	Unit	Medchem:	Quantitative	References	Links to Reaxys							
2	CN1CCN(CC2=CC=(	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
3	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
4	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
5	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
6	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
7	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
8	N[C@H]1CC[C@@H	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
9	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
10	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
11	CCCCN(C)C1=NC=C	In Vitro (Efficacy)	IC50	nM		100 - 1000	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
12	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
13	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
14	CCCCNC1=NC=C2C	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
15	O[C@H]1CC[C@@H	In Vitro (Efficacy)	IC50	nM	<	10	Patent; THE UNIVERSI	https://www.reaxys.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
16	CCC							s.com/reaxys/secured/hopinto.do?context=C&query=CNR.CNR=35474696&data							
17	CCC							s.com/							
18	CCC							s.com/							
19	CCC							s.com/							
20	CCC							s.com/							
21	CCC							s.com/							
22	CCC							s.com/							

Table 2 describes compounds prepared following procedures described in **Example 2** (General Procedure B), using appropriate reagents. (Note: Mer IC50: ++++ means < 10 nM; +++ means between 10-100nM, ++ means between 100 nM-1 μM; + means between 1-30 μM; - means inactive.)

	Structure	Compound_ID	Mer IC_{50}	**Physical Data** MS m/z (M+1) or/and ^{1}H NMR (400 MHz, CD_3OD)
1		UNC1970A	++++	^{1}H NMR (400 MHz, CD_3OD) δ 8.75 (s, 1H), 7.81 (s, 1H), 7.71–7.62 (m, 2H), 7.25–7.16 (m, 2H), 4.72–4.60 (m, 1H), 3.55 (t, J = 7.1 Hz, 2H), 2.30–2.22 (m, 2H), 2.23–2.03 (m, 4H), 1.79–1.63 (m, 4H), 1.55–1.44 (m, 2H), 1.02 (t, J = 7.4 Hz, 3H); MS m/z 382.25 $[M+H]^+$.

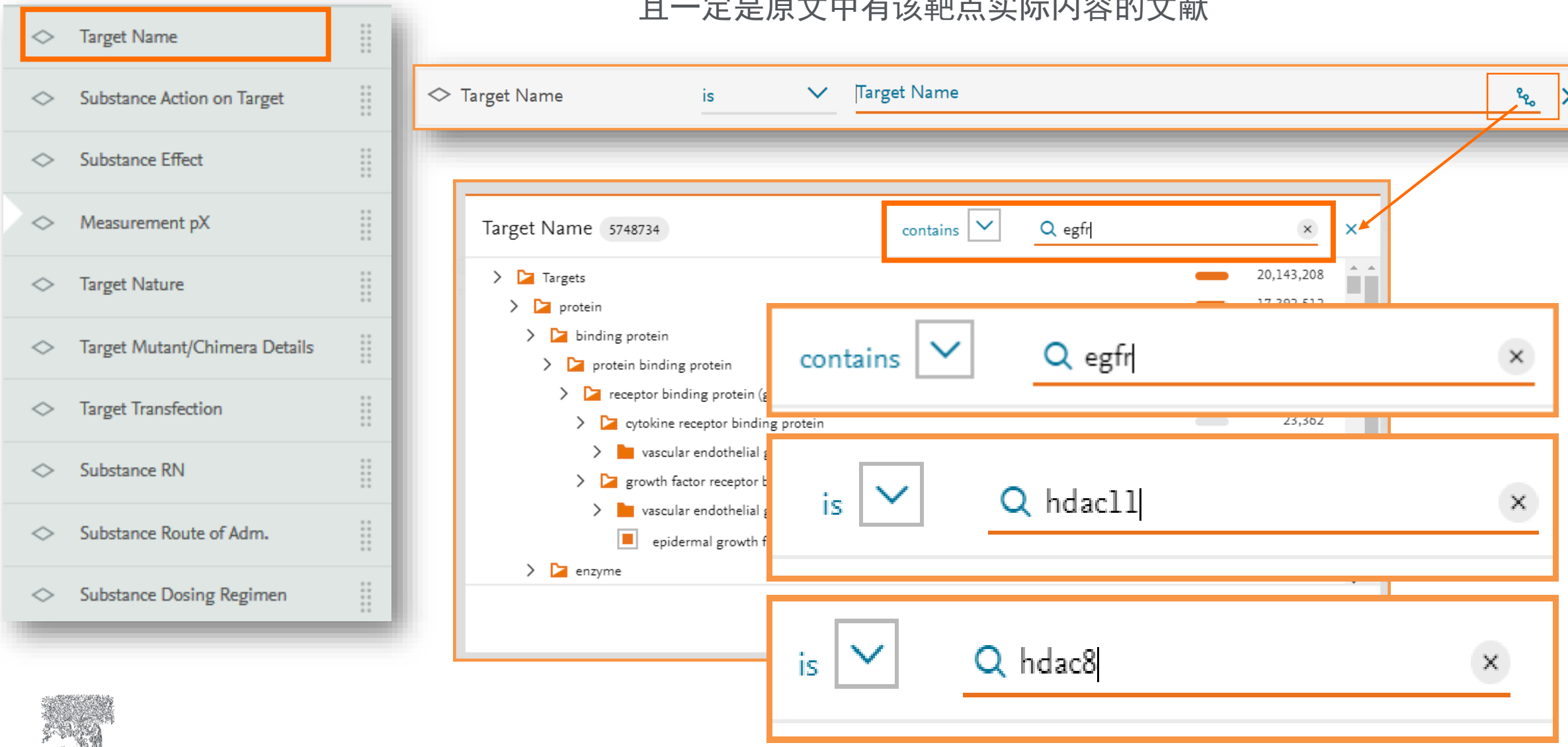
Reaxys把原文中的图形结果，进行了数字化翻译

	A	B	C	D	E	F	G	H	I	J	K
1	Structure: Image	SMILES	Molecular	Molecular	InChI Key	LogP	TPSA	Lipinski Nu	Veber Nun	Target Nar	Measuren
2		CCCC(=O)N	C28H28N6	496.569	TYDXNFSX	4.98	114.05	4	1	Rho-assoc	IC50
3		CCCC(=O)N	C28H28N6	496.569	TYDXNFSX	4.98	114.05	4	1	Rho-assoc	IC50

Reaxys Export 20190221_161558

RMC-特定的信息检索方法

可以通过靶点，快速索引到，对应的化合物，文献等信息，
且一定是原文中有该靶点实际内容的文献



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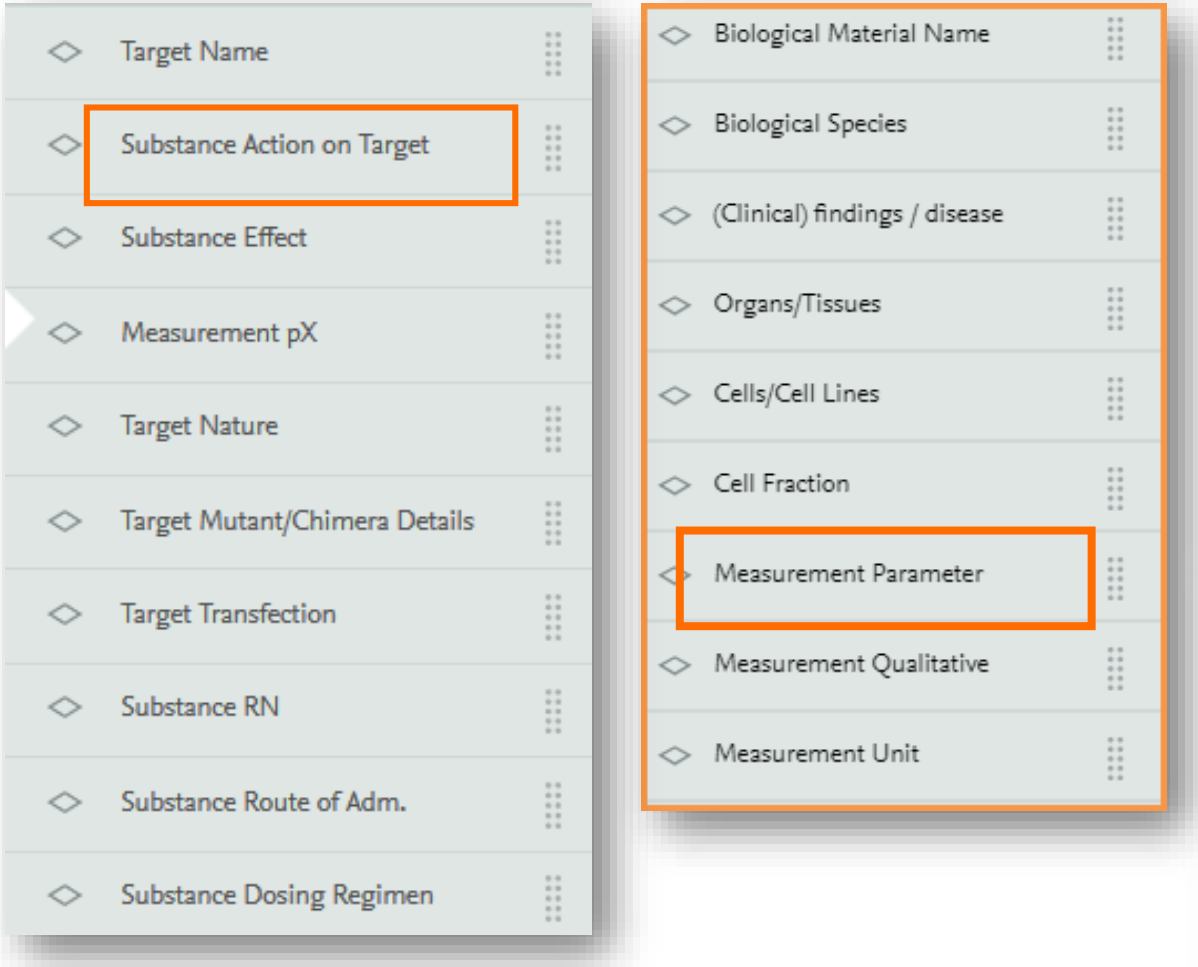
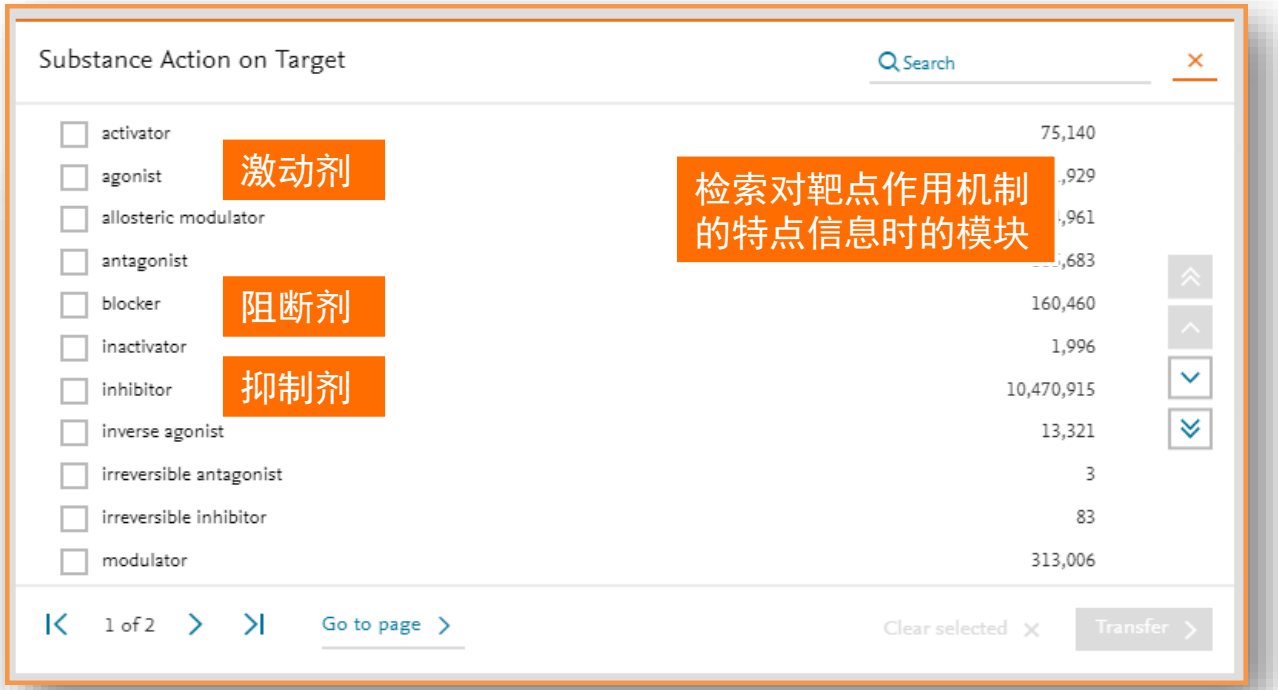
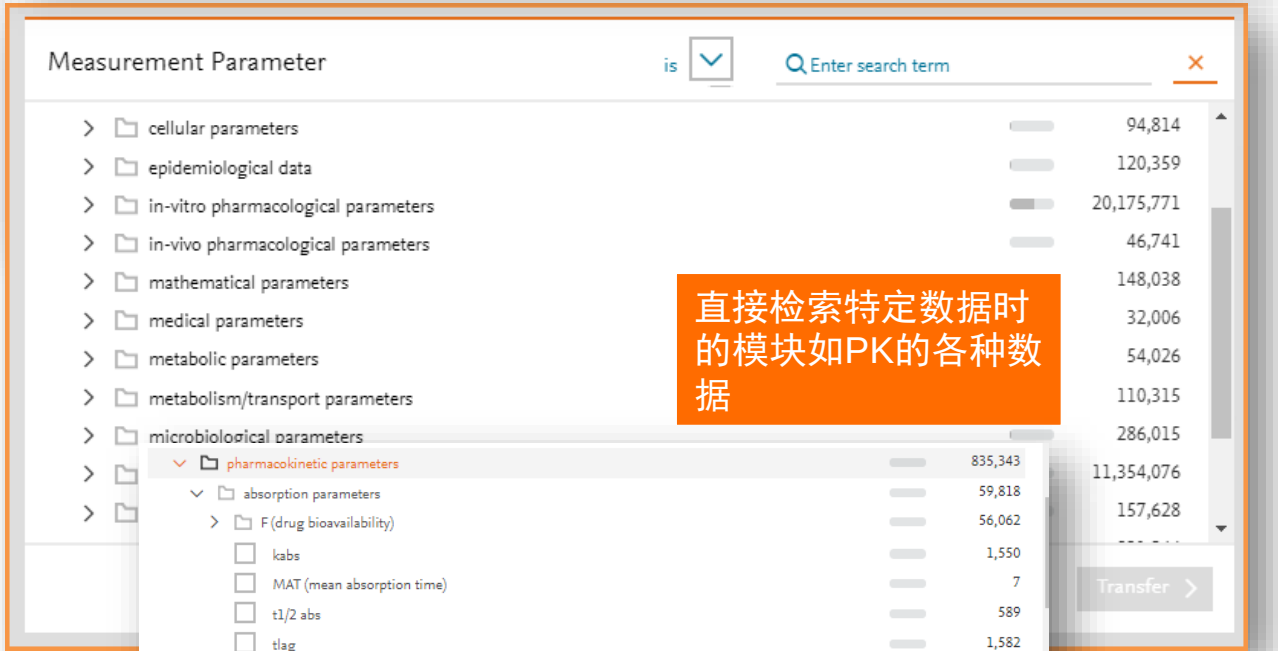
RMC-特定的信息检索方法



各种分类细致的信息检索模块，快捷锁定对应结果





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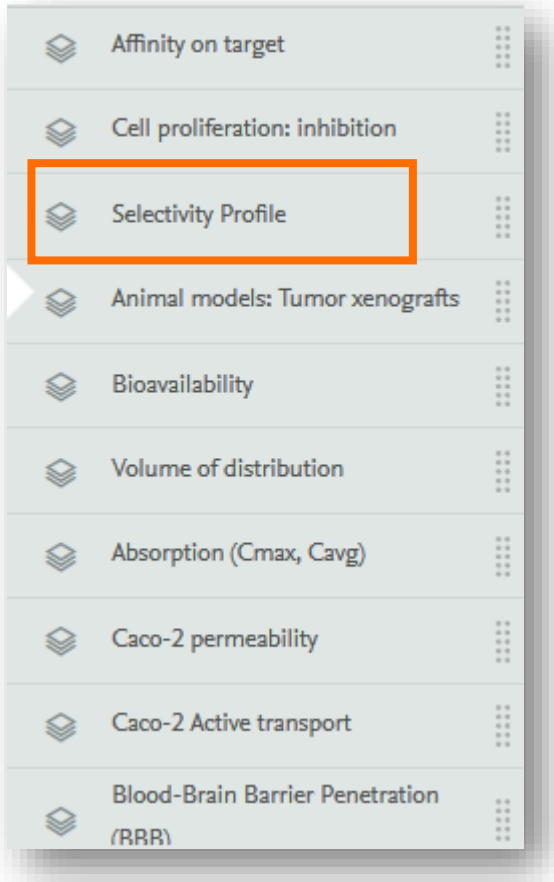
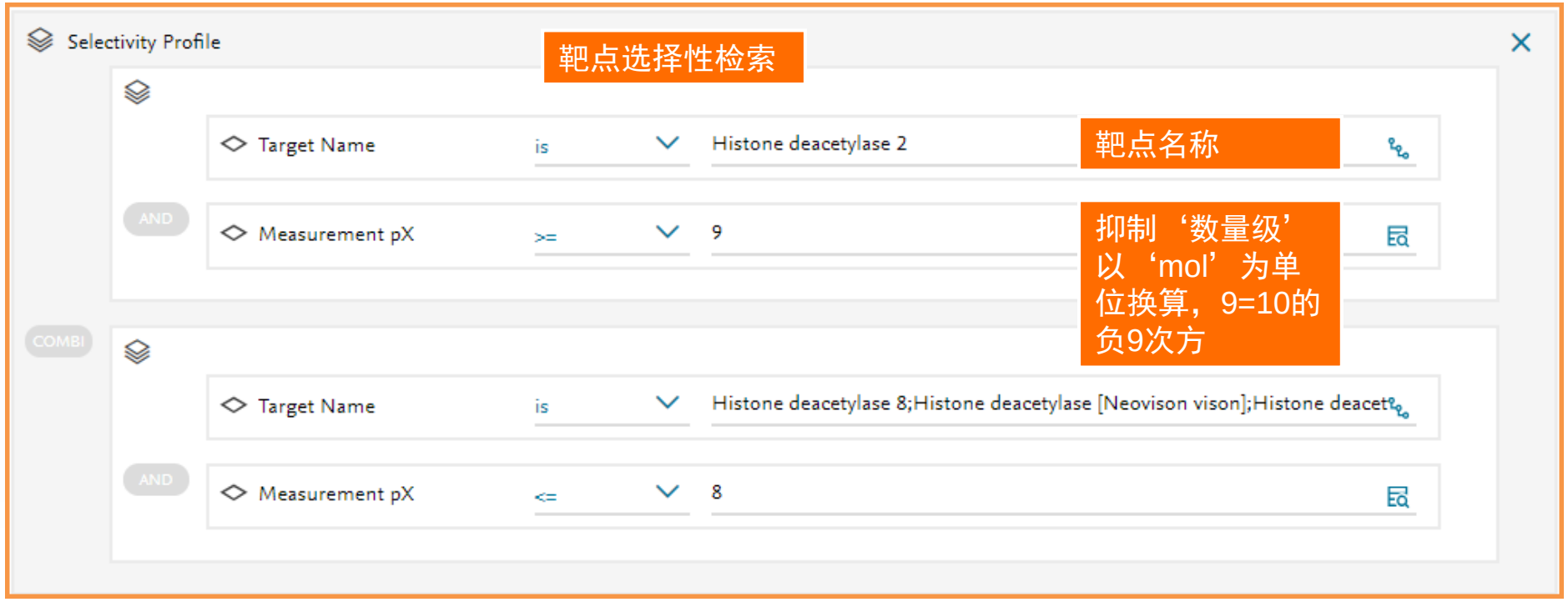
RMC-组合信息便捷检索



预设的组合检索模块，便捷检索综合信息，如对于不同亚型的同类靶点，差异抑制性



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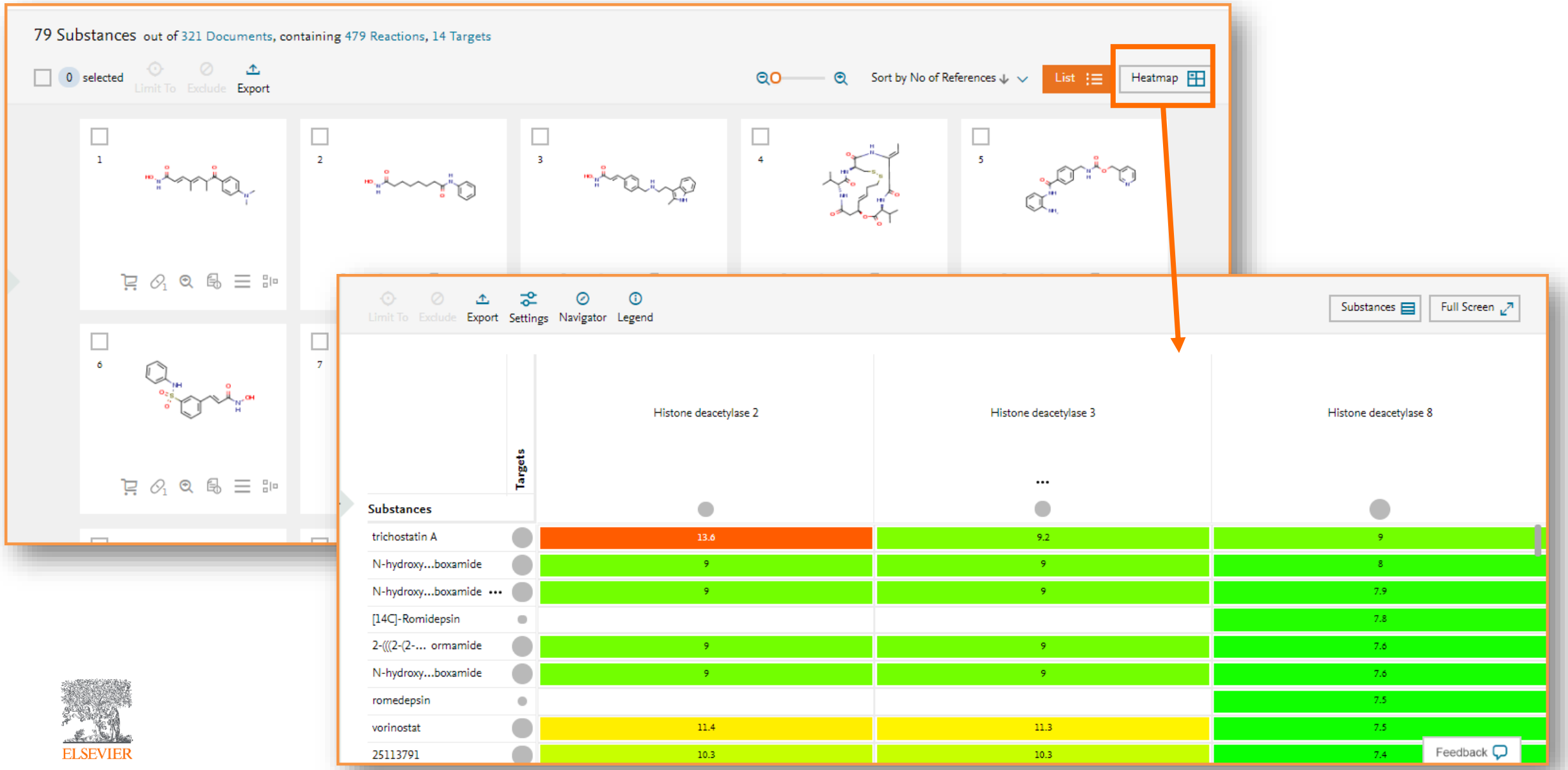
选择性抑制结果-快速构建差异抑制构效关系图



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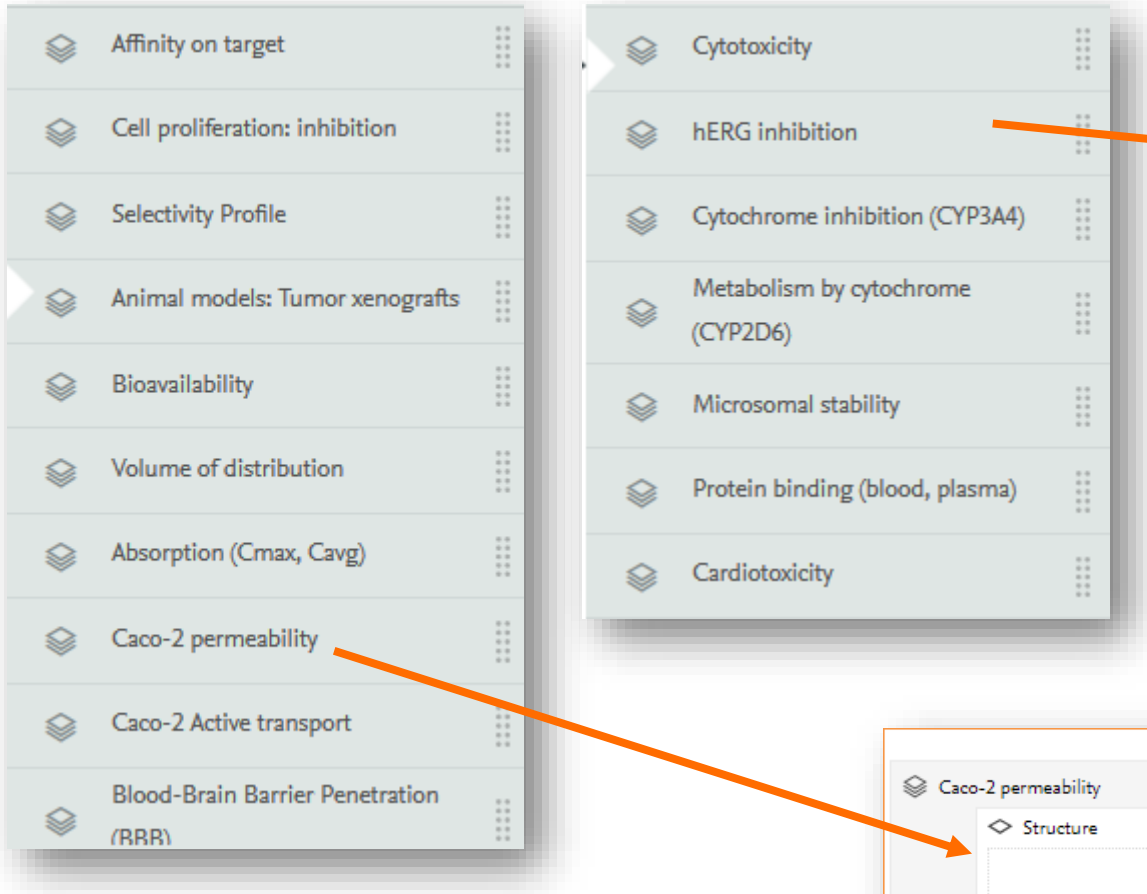
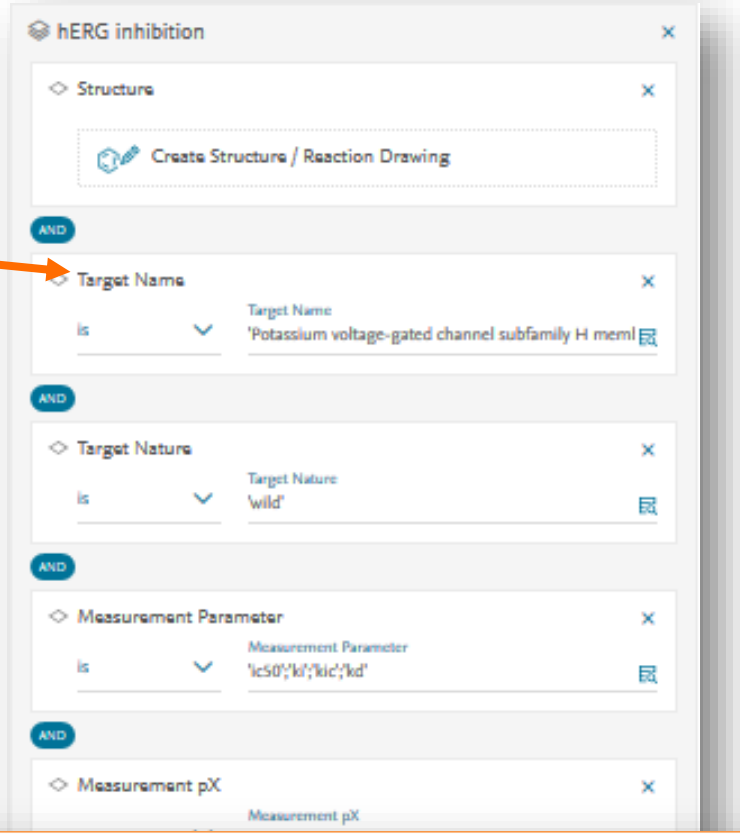
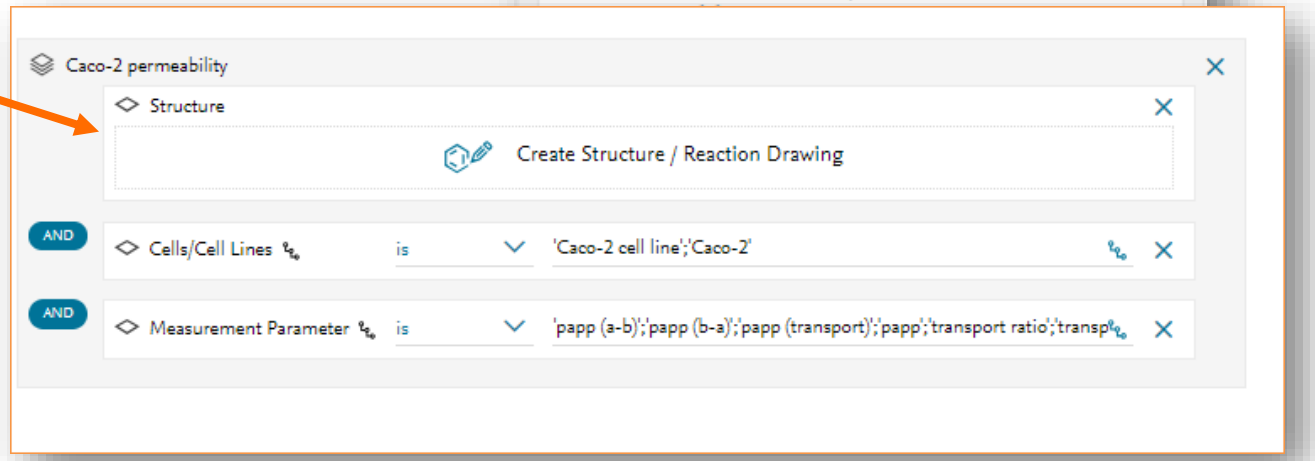
RMC-组合信息便捷检索







只需要特定结构即可初步快速检索特殊信息

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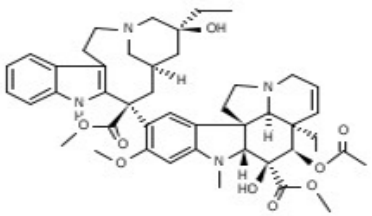
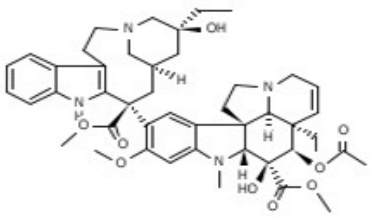
RMC-组合信息便捷检索

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
									快速整理‘特定结构’Caco-2 数据							
89		[H][C@@]1	https://ww	(17 of 954)	363623-08	vinblastin	810.988	Caco-2 ce	Papp (B-A	cm/s	9.66E-06		Article; Ach	https://www.reaxys.com/reax	ys/se	
		[H][C@@]1	https://ww	(17 of 954)	363623-08	vinblastin	810.988	Caco-2 ce	Papp (A-B	cm/s	1E-07		Article; Car	https://www.reaxys.com/reaxys/se		

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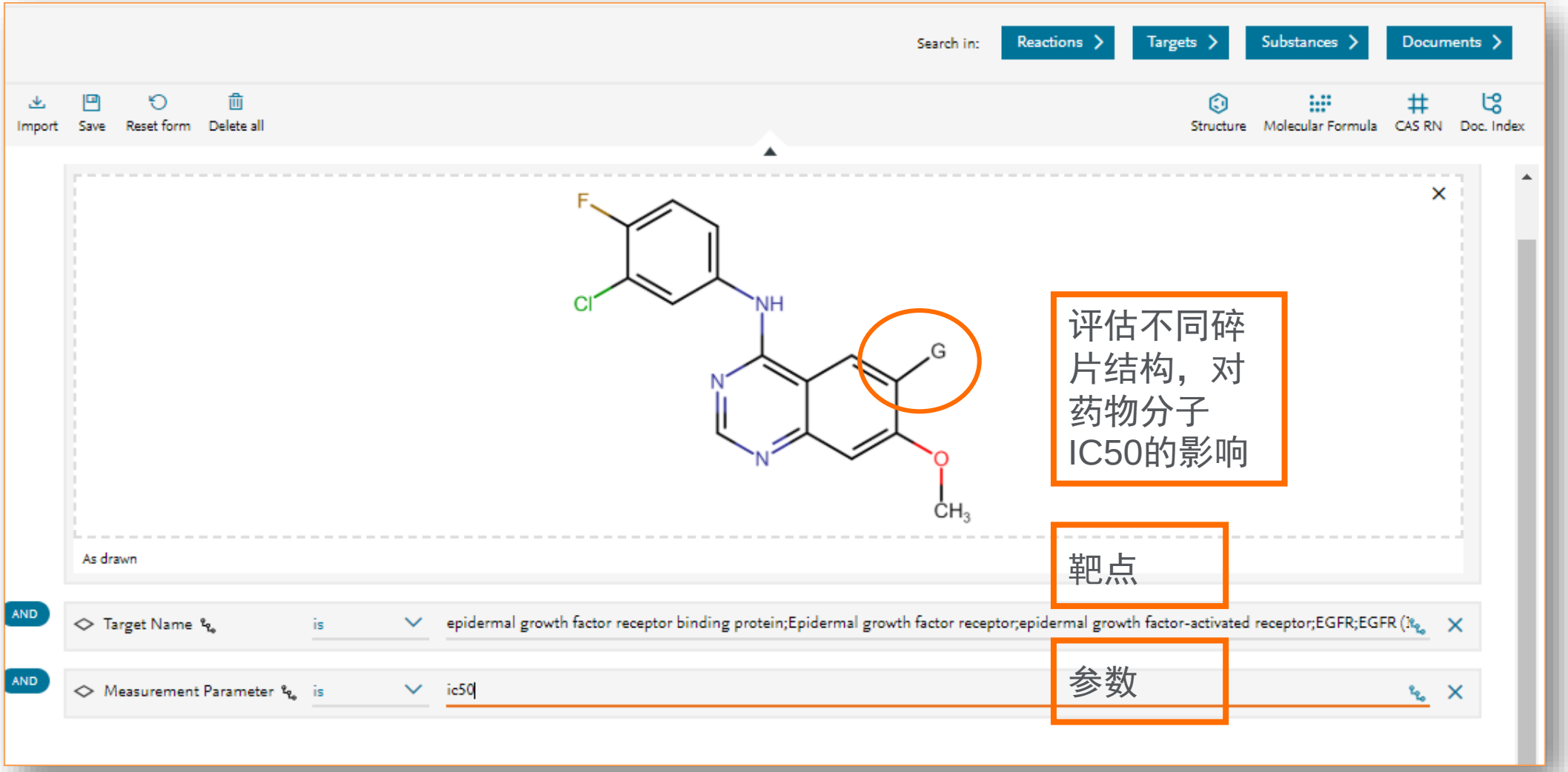
RMC强大的组合式药物化学检索模块定义复杂问题



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同位置侧链，生物活性影响度评估

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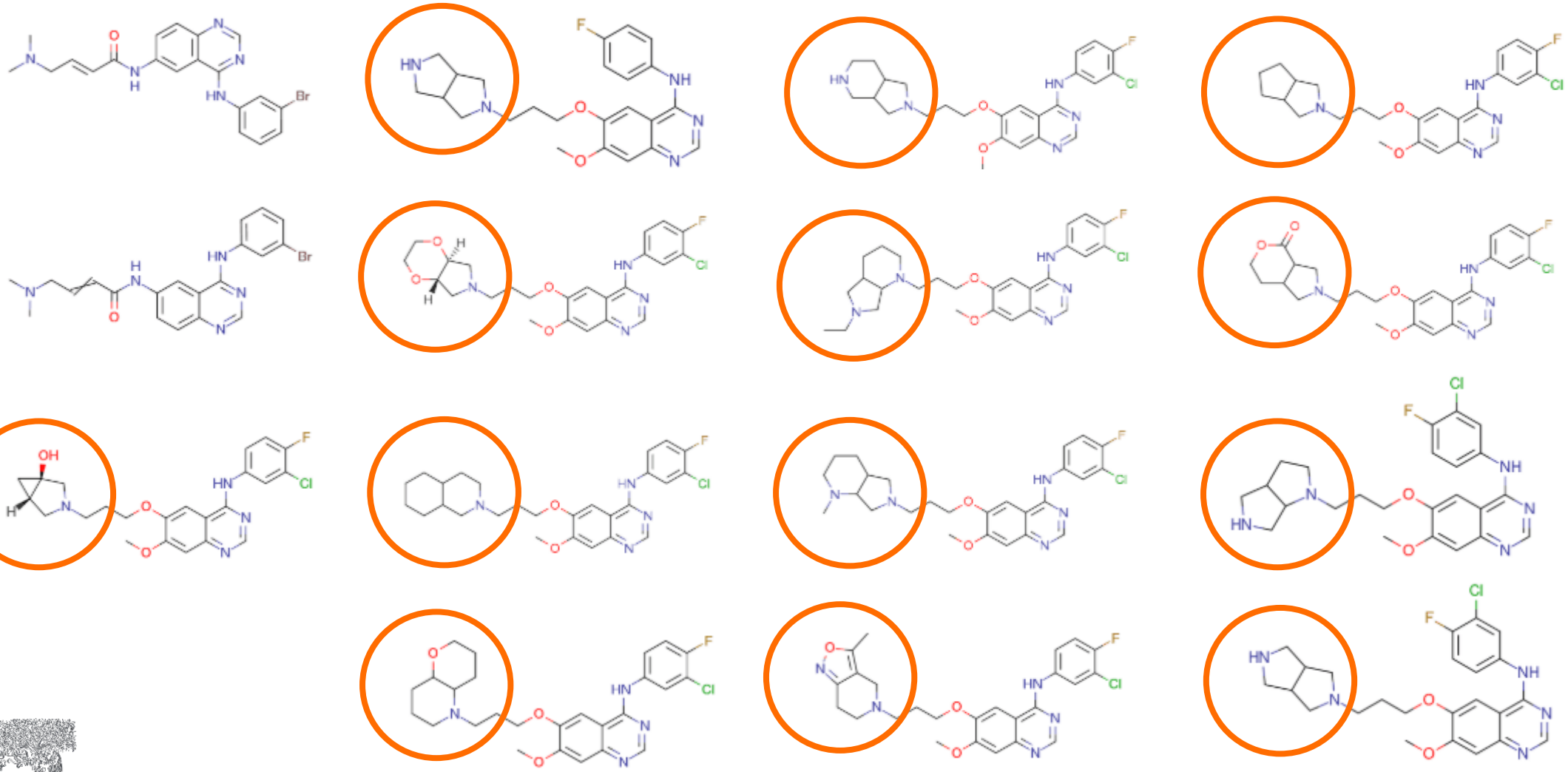
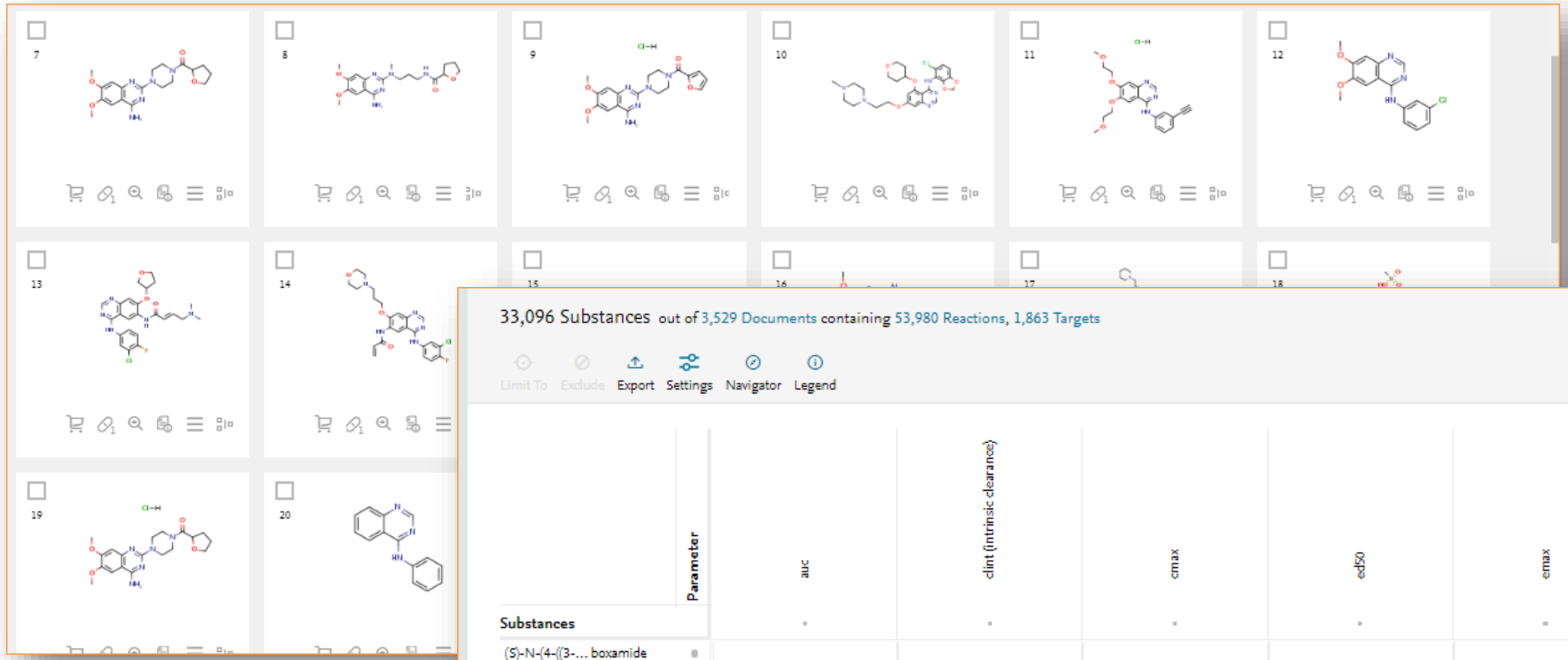
筛选出高活性化合物，获取设计灵感



以结构为基础，多种数据组合评估



33,096 Substances out of 3,529 Documents containing 53,980 Reactions, 1,863 Targets

Reaxys - 33,096

Limit To | Exclude | Export | Settings | Navigator | Legend

Substances | Full Screen

Substances	Parameter	auc	clint (intrinsic clearance)	cmax	ed50	emax	gi50	ic50	t1/2 el
(5)-N-(4-((3-... boxamide								9.4	
(4S,5R)-N-(4... boxamide								9.4	
N-(2-chloro-... fonamide								9.4	
N-(5-(3,5-di... -4-amine								9.4	
N-(5-(3,5-di... -4-amine								9.4	
6-(1-acryloyl... -4-amine								9.4	
(5)-N⁶-(1-acr... -diamine								9.4	
28395477								9.4	
27951527								9.4	
N-(3-bromo... -4-amine								9.4	
N-(3-bromo... -4-amine								9.4	
N-(3-chloro- -4-amine								9.4	

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内容

- Elsevier 生命科学解决方案
  1. Reaxys对信息的提炼介绍，以及信息检索基础技巧
  2. Reaxys专利检索策略
  3. RMC辅助药物分子设计研发决策
  4. PharmaPendium辅助药物临床研究
- 总结

PharmaPendium数据库涵盖的内容

PharmaPendium是唯一提供上市药物，临床前与临床，药效，药物安全与药代动力学、药物代谢与转运酶，药物不良反应报告等数据的一站式平台；同时还收录此领域的权威期刊书籍内容，如Meyler副反应大全和Mosby用药参考等，助力药物筛选和研发进程。

FDA & EMA所有的approval package（FDA: 1938年至今， EMA: 1995年至今）

2.29M+	200K+	9.45M+	673K+
FDA 审评文件	EMA 审评文件	FDA 药物不良反应报告	FDA 咨询委员会会议档案

Extracted Data: PK Module | MET Module | FDA AERS | Efficacy Module | DDI Risk

4450	1.6M+	305K+	1.66M+	2.45M+	115K+
种药物的可检索信息	药代动力学信息	药物代谢与转运酶信息	药物安全信息	药效信息	生物活性信息

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Pharmapendium辅助解决临床前，临床，以及上市后信息检索的需求/挑战

药物发现 → 临床前研究 → 临床研究 → 药物上市后

药物安全与毒理（Safety,Toxicity）

- 支持临床前动物毒理数据分析
- 支持临床人体毒理研究
- 辅助临床试验方案决策
- 更好地预测候选药物的潜在毒性

药物代谢，转运酶及药物相互作用（MET&DDI）

- 查找获批药物的代谢酶、转运体的相关数据，辅助在研项目的决策
- 基于已有的代谢数据，判断在研药物发生药物相互作用的可能性
- 根据获批药物的真实数据，构建药物的相互作用模型

药代动力学与药效（PK&Efficacy）

- 更详细地评价候选药物的药物动力学参数和性质
- 为候选药物的筛选，评估与优先性等提供参考
- 辅助临床前动物模型选择与药效研究
- 为药物临床试验方案设计提供信息参考
- 辅助选择更合理的给药方式，并类推到整个药物类型研究中
- 通过药效数据综合分析，增加候选药物申报的成功机率

药物不良反应追踪与药物注册（Registration,AERS）

- 直观的大数据药物不良反应分析，辅助药物安全评估
- 分析FDA和EMA审批过程中的差异，为药物审批占得先机。
- 通过分析药物各阶级详细数据，增加候选药物申报的成功机率

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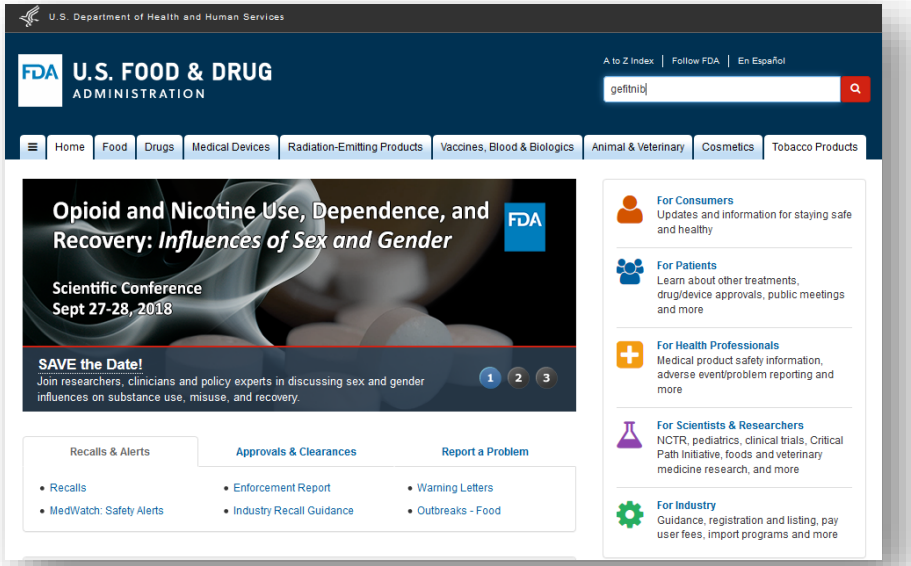
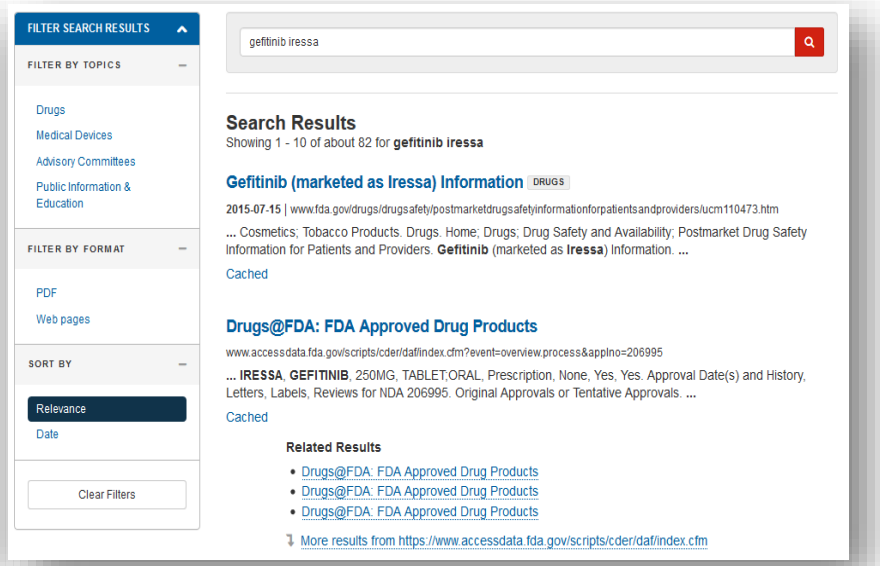
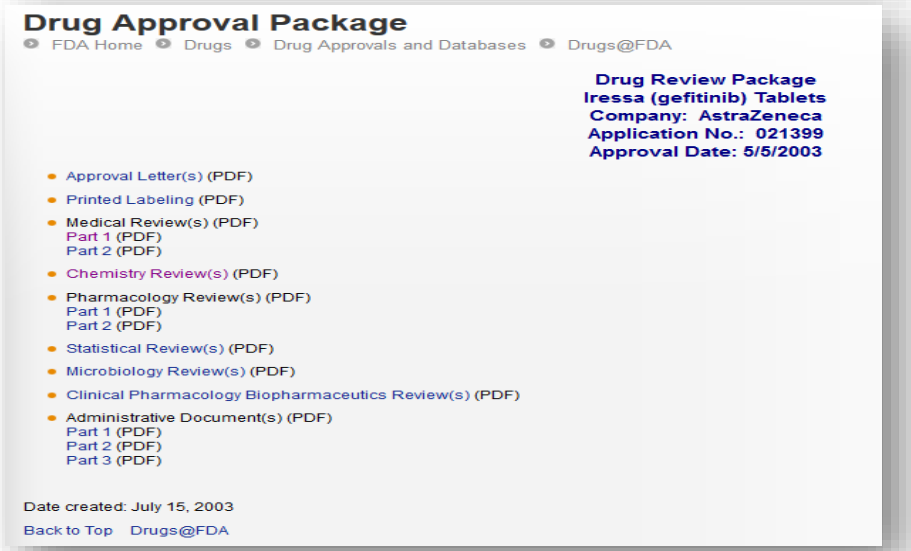
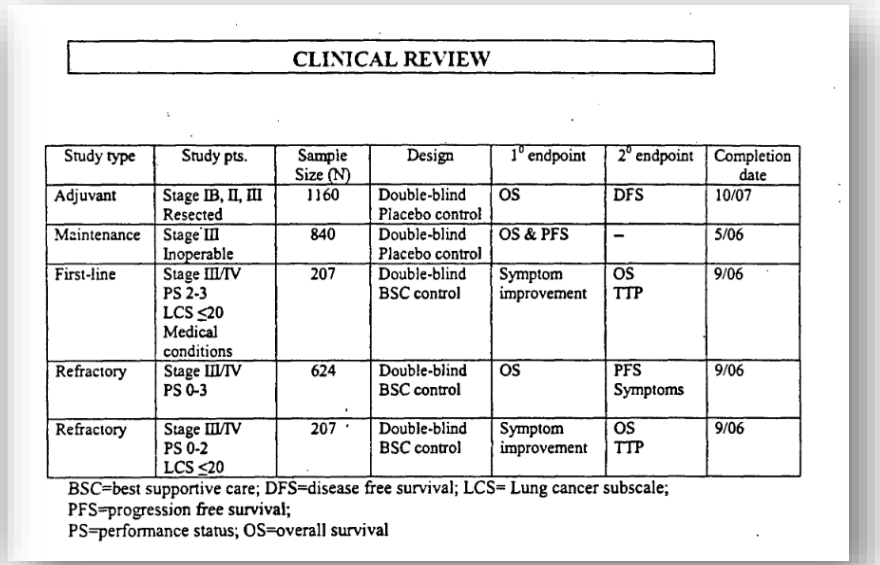
PharmaPendium深度提取FDA,EMA官方文档中的数据









CLINICAL REVIEW

Study type	Study pts.	Sample Size (N)	Design	1° endpoint	2° endpoint	Completion date
Adjuvant	Stage IB, II, III Resected	1160	Double-blind Placebo control	OS	DFS	10/07
Maintenance	Stage III Inoperable	840	Double-blind Placebo control	OS & PFS	–	5/06
First-line	Stage III/IV PS 2-3 LCS ≤20 Medical conditions	207	Double-blind BSC control	Symptom improvement	OS TTP	9/06
Refractory	Stage III/IV PS 0-3	624	Double-blind BSC control	OS	PFS Symptoms	9/06
Refractory	Stage III/IV PS 0-2 LCS ≤20	207	Double-blind BSC control	Symptom improvement	OS TTP	9/06

BSC=best supportive care; DFS=disease free survival; LCS= Lung cancer subscale;
PFS=progression free survival;
PS=performance status; OS=overall survival

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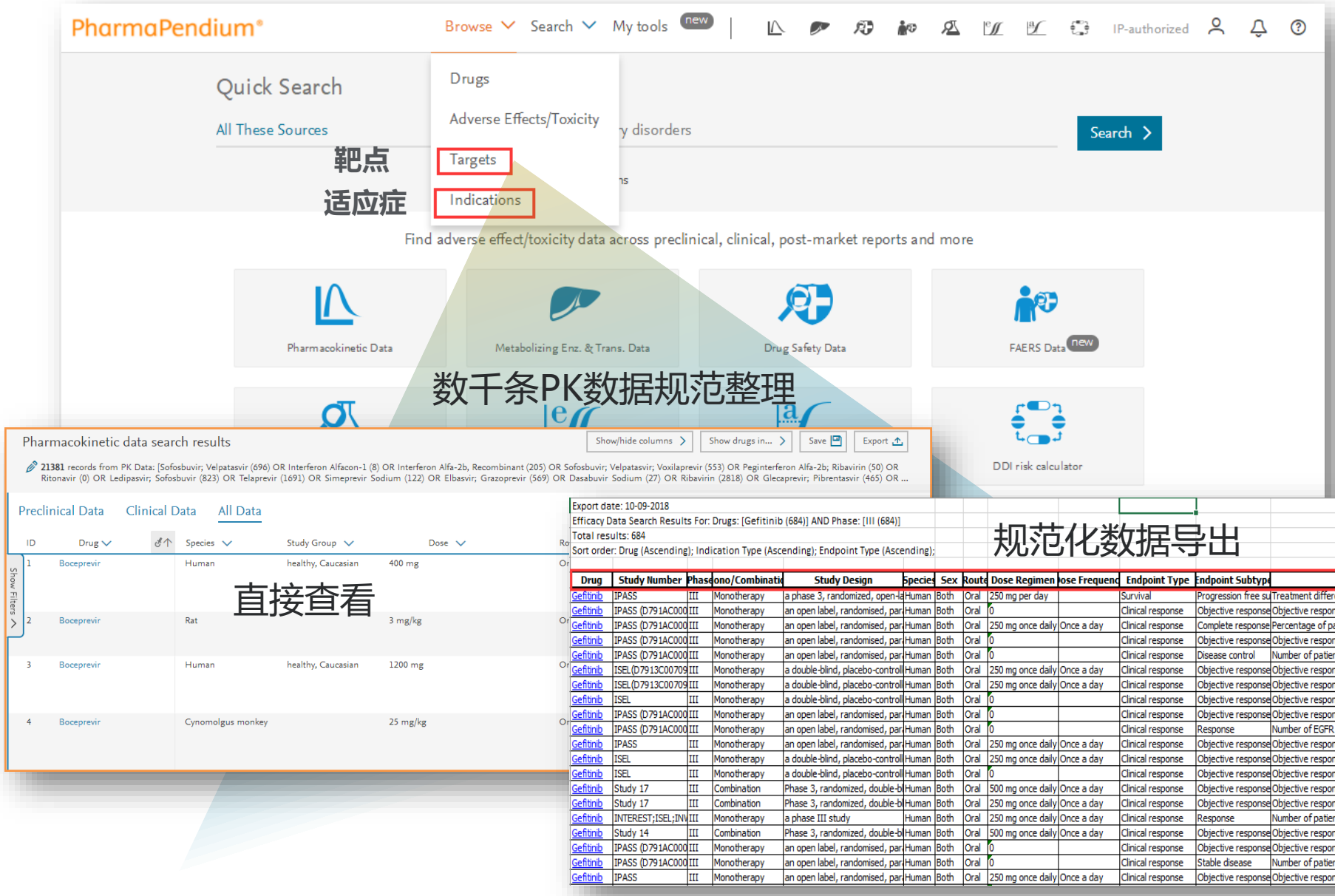
PharmaPendium深度提取FDA,EMA官方文档中的数据



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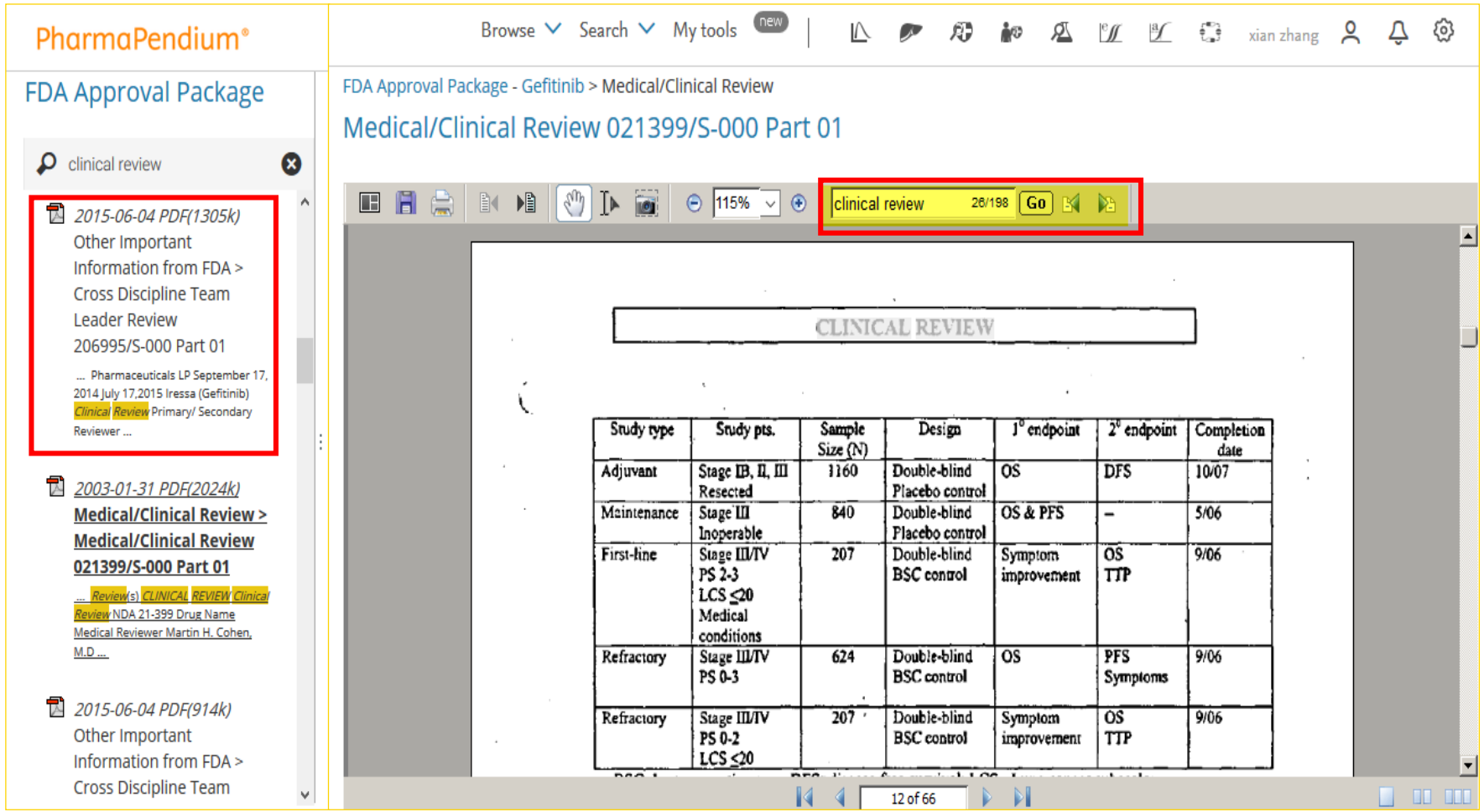
PharmaPendium深度提取FDA,EMA官方文档中的数据

‘**原文图片检索**’功能，直接原文中的‘**指定内容**’，便于阅读‘**关键信息**’



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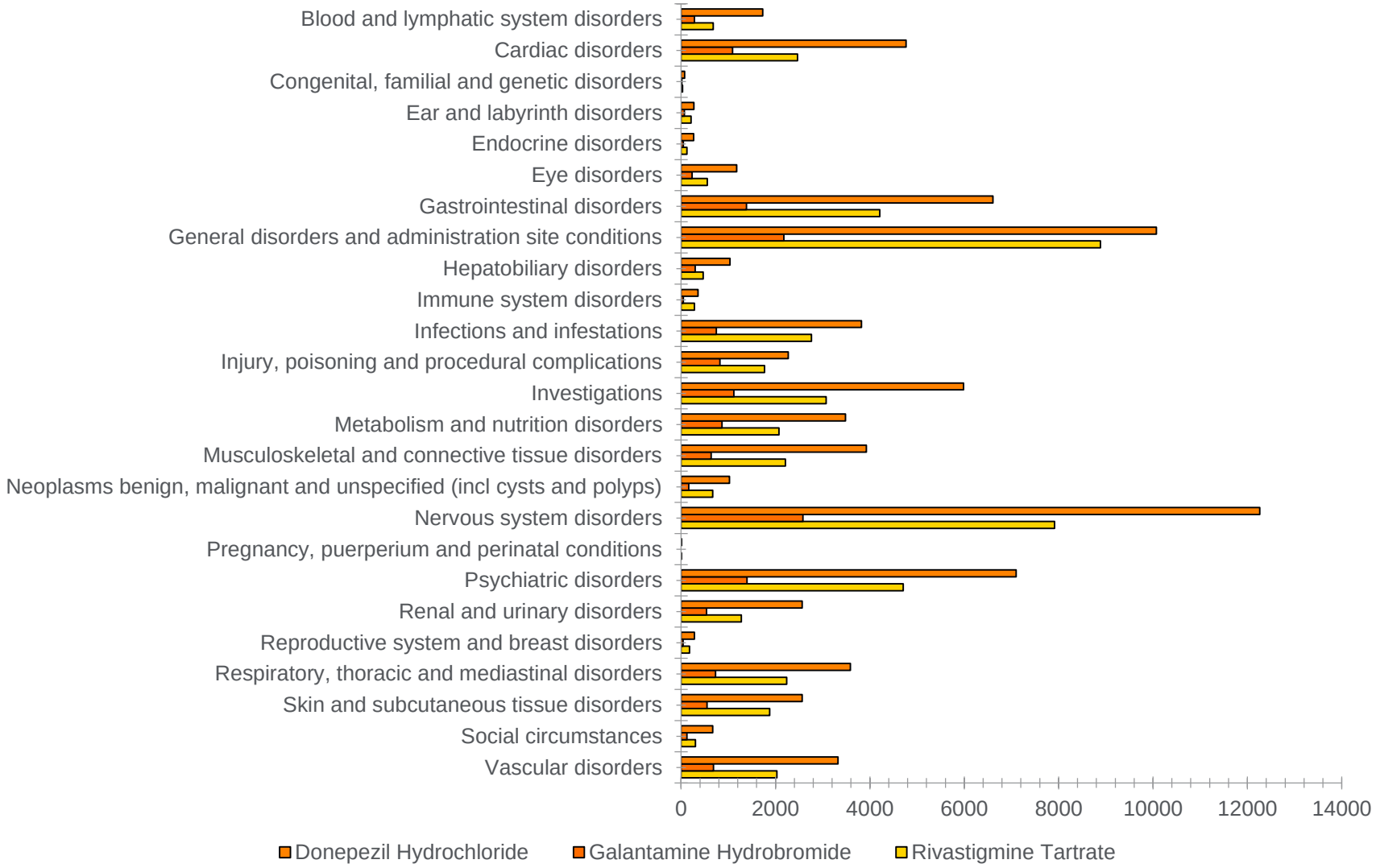
直方图总览，展示副作用分布，辅助决策

多奈哌齐，加兰他敏，卡巴拉汀直方图



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PharmaPendium在全球超过100家用户，其中包括FDA，全球前20的制药企业，日本前10的制药企业等

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Thank you