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ChemExpo INDIA

# Advance R&D innovations with Elsevier research solutions

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ELSEVIER LIFE SCIENCES

OUR SHARED PURPOSE

# TO ACCELERATE SCIENCE TO IMPROVE HEALTH

A Knowledge & Information Analytics Company

OUR PROMISE

Partners in propelling research and innovation forward to transform the way you bring new medicines to the world

## OUR KEY DIFFERENTIATORS

- Customer First Commitment
- Our Roots As A Knowledge Company
- Open Integrated Systems
- Accelerating Data-Driven Decisions
- Market-Leading Talent

**140+**

years of scientific knowledge curation

RELX

**$1.4bn**

on technology annually

**~30,000**

employees

Serving customers in

**180+ countries**

Partnering with

**90%**

of top Pharma companies

# Elsevier's Innovative solutions with multifunctional approach

### Intellectual Property
- Patent registration and litigation
- Prior art, FTO…

### Pharma/non-pharma chemical R&D/manufacturing

### Data Science/ Bio-/Cheminformatics
- Develop machine learning algorithms
- In-silico screens for safety, efficacy…

### Pharmacovigilance
- Monitor drug safety
- Risk mitigation

### Non-clinical R&D
- Assess safety, pharmacology, DMPK
- Clinical trial risk mitigation

### Business Development/ Market Research
- Identify unmet medical needs
- In-licensing

### Clinical R&D
- Clinical trial design
- Evaluate safety, efficacy, dosage

### Knowledge Management
- Provide and integrate content
- Foster innovation

### Medical Affairs/MSL
- Generate evidence
- Engage with healthcare ecosystem

### Regulatory affairs
- Regulatory submissions
- Develop regulatory strategy

Click on departments for more information

## Insights tailored to your needs

Reaxys®
Scopus®
Embase®
EmBiology
ScienceDirect
PharmaPendium®
Professional Services
SciBite: TERMite/CENtree

Click on solutions for more information

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NOT EXHAUSTIVE

# Challenges to the pharma/chemical sector in India

Global economy

Price control and market dynamics

Import dependence,

R&D investment


IPR issue

Sustainability

Regulatory Compliance and Quality Standards


Competitive threat

Surge in technology price

Pricing Pressure in Export Markets

# Challenges to the pharma/chemical sector in India

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Sustainability

Cost control and market dynamics

Regulatory Compliance and Quality Standards

Import dependence


Competitive threat

Surge in technology price

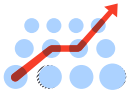
R&D investment


IPR issue

Pricing Pressure in Export Markets

# What if there is a better way to be More efficient in Route of Synthesis (ROS) designing?

# Innovation intelligence with dedicated data and information access

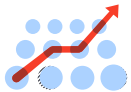


**Impact of Exhaustive Dataset**

- **Confidence in handling competitive intelligence/novelty search**

- **Cost-effective, time-bound, and sustainable approach**

- **Stay ahead on the competitive scale**



- **Acceleration of business growth to the next level**

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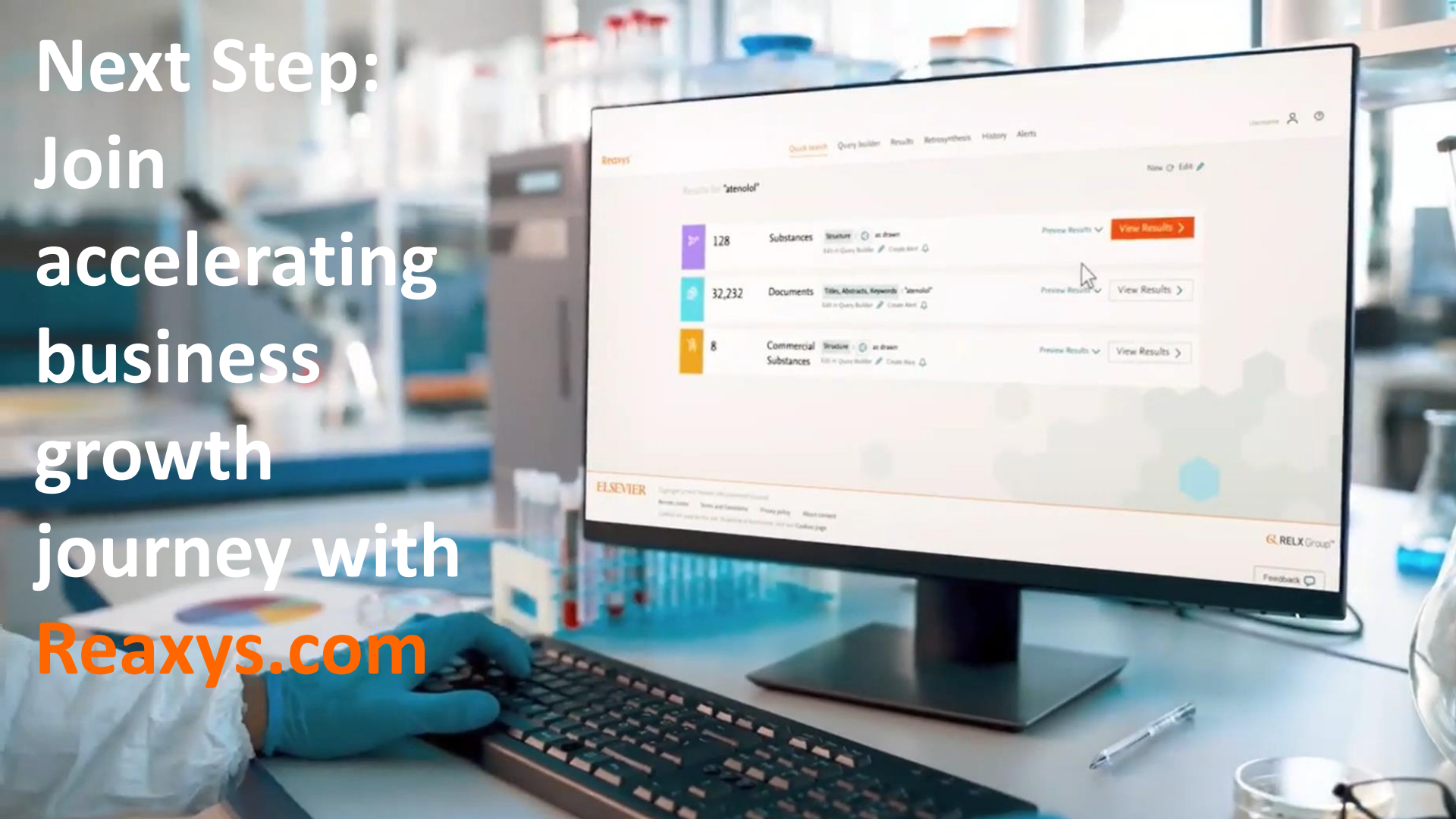
Next Step:
Join accelerating business growth journey with
Reaxys.com
Reaxys
Quick search
Query builder
Results
Retrosynthesis
History
Alerts
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128
Substances
32,232
Documents
8
Commercial Substances
View Results
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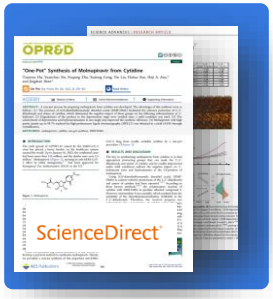
RELX Group
Feedback

# Application of award-winning programmatic extraction technologies to Patents and journals expansion




**Bibliographies**
- 105 Patent Offices
- 18000 Journal Titles

**Biological Targets** for Patents

**Substances**
- From text
- From images

**Chemistry keywords**

Reaxys

2021: **2M**

2024: > **42M**

**1- High quality, comprehensive content**

Meet the team

Dr. Nina Kaun

Dr. Michael Maier

| >42 M | 113 M | 105 | 173 | 46 M | 18 K | > 1 Bn |
|---|---|---|---|---|---|---|
| Patents | Documents | Patent Offices | IPC subclasses | Bioactivity data | Journals | Experimental Facts |

Winners of Cypher Data Science Excellence Awards 2022

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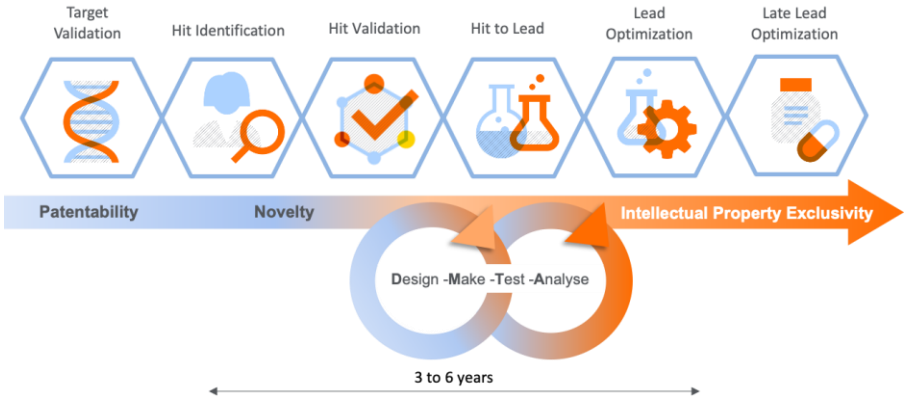
# Ensure your projects are designed competitively and remain patentable throughout the discovery years

- Reaxys offers **fast** and **comprehensive** access to **patents** for Novelty search & Competitive Intelligence




- ✓ Confidently assess the **IP landscape** of a **biological target**, check the **novelty of the compounds** in your pipeline and stay on top of **emerging competitors**

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Access the largest resource for newly published chemistry patents from 105 offices and 170 IPC classes

Discover more with the only chemistry database that translates non-English language abstracts & claims

Access the latest published substances, indexed across the full patent body for priority patent offices

Capture relevant results for target validation with our target (gene/protein) indexing for priority patent offices

Do competitive deep-dives with our advanced search for patent assignee

Patents and substances available 5 days after publication. Stay up-to-date with email alerts.

# Patent information is easily discoverable in Reaxys' Document results page

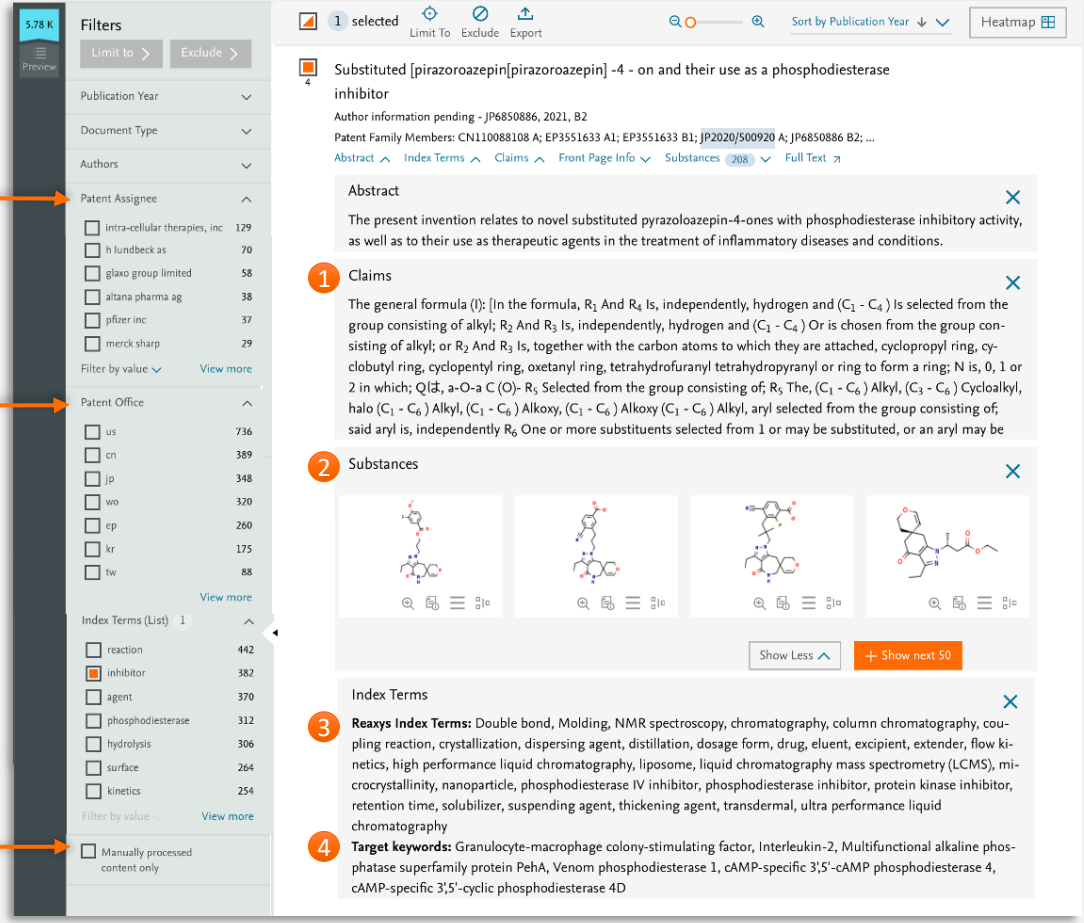
1- High quality English translation of abstracts and claims easily accessible in the UI - as it is the case for this Japanese patent

2- Substance excerption of all compounds from the full patent body. Common solvents and reagents excluded for fast access to the most important compounds in the patent.

3- Reaxys Indexed Terms extract chemistry relevant concepts to enhance patent search and discovery.

4- Primary target indexing, including target synonym expansion, to access all relevant patents on a given biological target.

New filters to facilitate navigation of results sets

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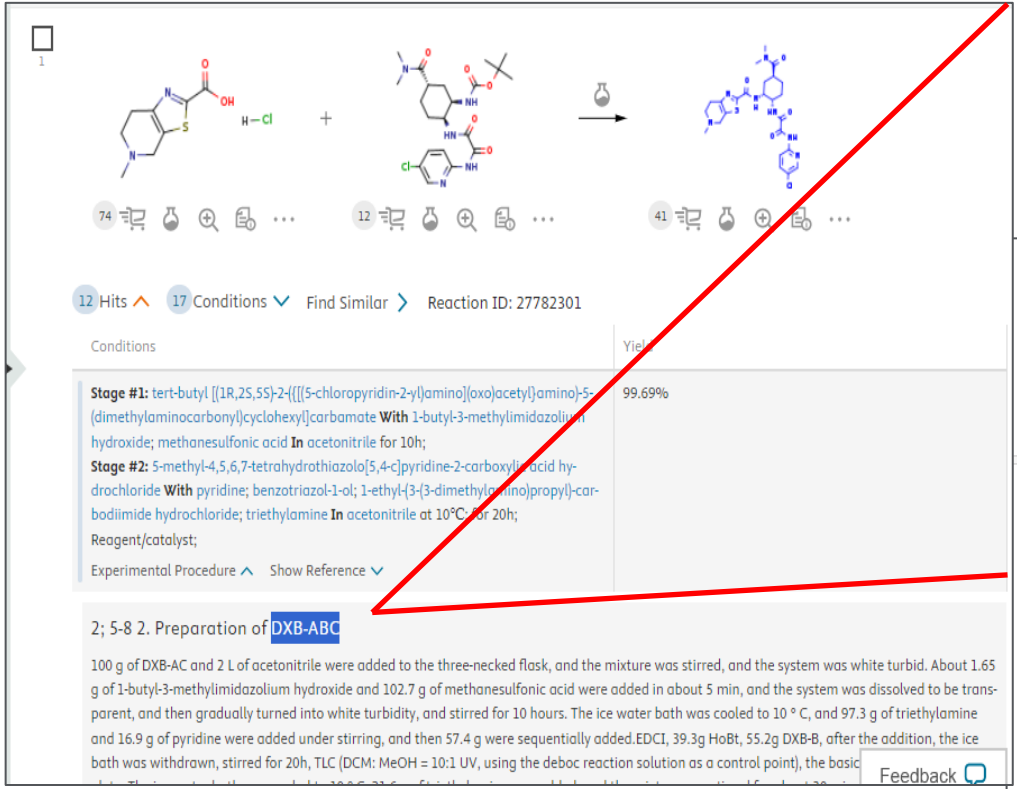
# High-quality English translation of experimental protocols e.g. Edoxaban



12 Hits | 17 Conditions | Find Similar | Reaction ID: 27782301

Conditions | Yield

**Stage #1:** tert-butyl [(1R,2S,5S)-2-{{[(5-chloropyridin-2-yl)amino](oxo)acetyl}amino)-5-(dimethylaminocarbonyl)cyclohexyl]carbamate **With** 1-butyl-3-methylimidazolium hydroxide; methanesulfonic acid **In** acetonitrile for 10h;
**Stage #2:** 5-methyl-4,5,6,7-tetrahydrothiazolo[5,4-c]pyridine-2-carboxylic acid hydrochloride **With** pyridine; benzotriazol-1-ol; 1-ethyl-(3-{3-dimethylamino)propyl)-carbodiimide hydrochloride; triethylamine **In** acetonitrile at 10°C for 20h;
Reagent/catalyst;

99.69%

Experimental Procedure | Show Reference

2; 5-8 2. Preparation of DXB-ABC

100 g of DXB-AC and 2 L of acetonitrile were added to the three-necked flask, and the mixture was stirred, and the system was white turbid. About 1.65 g of 1-butyl-3-methylimidazolium hydroxide and 102.7 g of methanesulfonic acid were added in about 5 min, and the system was dissolved to be transparent, and then gradually turned into white turbidity, and stirred for 10 hours. The ice water bath was cooled to 10 ° C, and 97.3 g of triethylamine and 16.9 g of pyridine were added under stirring, and then 57.4 g were sequentially added.EDCI, 39.3g HoBt, 55.2g DXB-B, after the addition, the ice bath was withdrawn, stirred for 20h, TLC (DCM: MeOH = 10:1 UV, using the deboc reaction solution as a control point), the basic

Feedback

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g of pyridine were added under stirring, and then 57.4 g were seque
drawn, stirred for 20h, TLC (DCM: MeOH = 10:1 UV, using the deboc
bath was cooled to 10 ° C, 21.6 g of triethylamine was added, and t
acetonitrile. The filter cake was dried by blasting at 45 ° C to obtain
DXB_ABCThe DXB-ABC crude product and 2 L of dichloromethane w
the solid was substantially dissolved. After suction filtration, the filt
ring, stirred for 30 min, and suction filtered. The filter cake was drie
white solid was added to a 2 L bottle, 1275 ml of methanol was add
blast dried to constant weight at 45 ° C to obtain a pale yellow to o
was added, stirred at room temperature for 10-15 h, suction filtered
was 99.69%, single impurity <0.1%, total impurity <0.5%. For the p

右加入

4/9 页

1.66g氢氧化1-丁基-3-甲基咪唑，102.7g甲磺酸，体系溶解至透明，后逐渐变为白色混浊，搅拌10h。冰水浴降温至10℃，搅拌下加入97.3g三乙胺和16.9g吡啶，然后依次加入57.4g EDCI、39.3g HoBt、55.2g DXB-B，加毕后，撤冰浴，搅拌反应20h，TLC（DCM:MeOH=10:1UV，用脱boc反应液作对照点）基本反应完全。冰水浴降温至10℃，加入21.6g三乙胺，搅拌30min左右。抽滤，用100ml乙腈淋洗。滤饼45℃鼓风干燥，得类白色固体，收率97%，纯度98.05%；

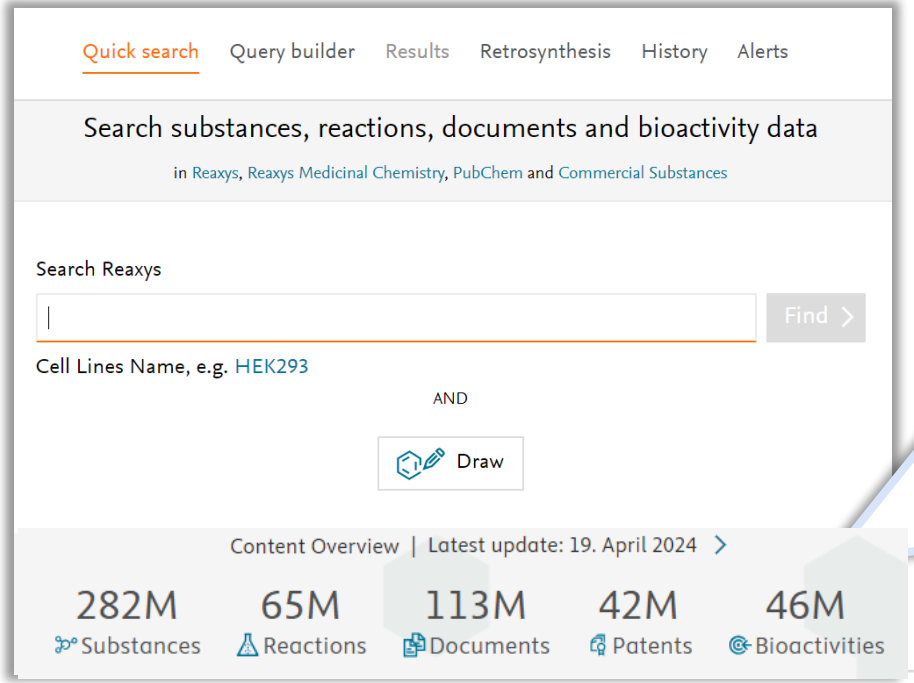
[0052] 3、DXB-ABC的精制

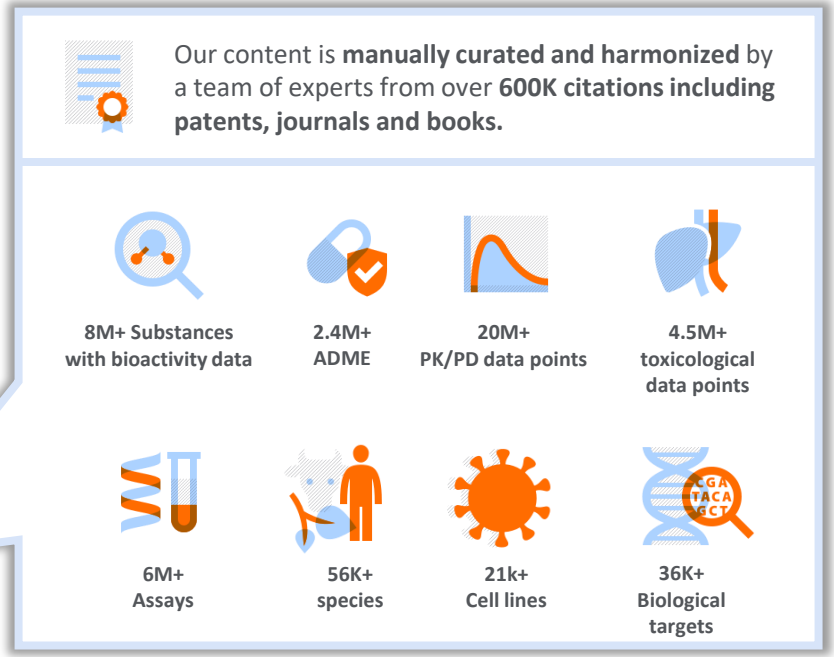
[0053] 向5L三口瓶中加入DXB-ABC粗品和2L二氯甲烷，搅拌20-30min，固体基本溶解。抽滤，滤液转入10L瓶，搅拌下加入4L正己烷，搅拌30min，抽滤。滤饼45℃鼓风干燥，得浅黄至类白色固体粉末；

[0054] 将上述类白色固体加入2L瓶，加入1275ml甲醇，室温搅拌10-15h，抽滤，滤饼45℃鼓风干燥至恒重，得浅黄至类白色固体；

# What do you need to consider for effective molecule design?

Make data driven decisions and find new ways of designing novel and safe compounds under tight timelines with Reaxys' Target & Bioactivity insights integrated into Reaxys.com

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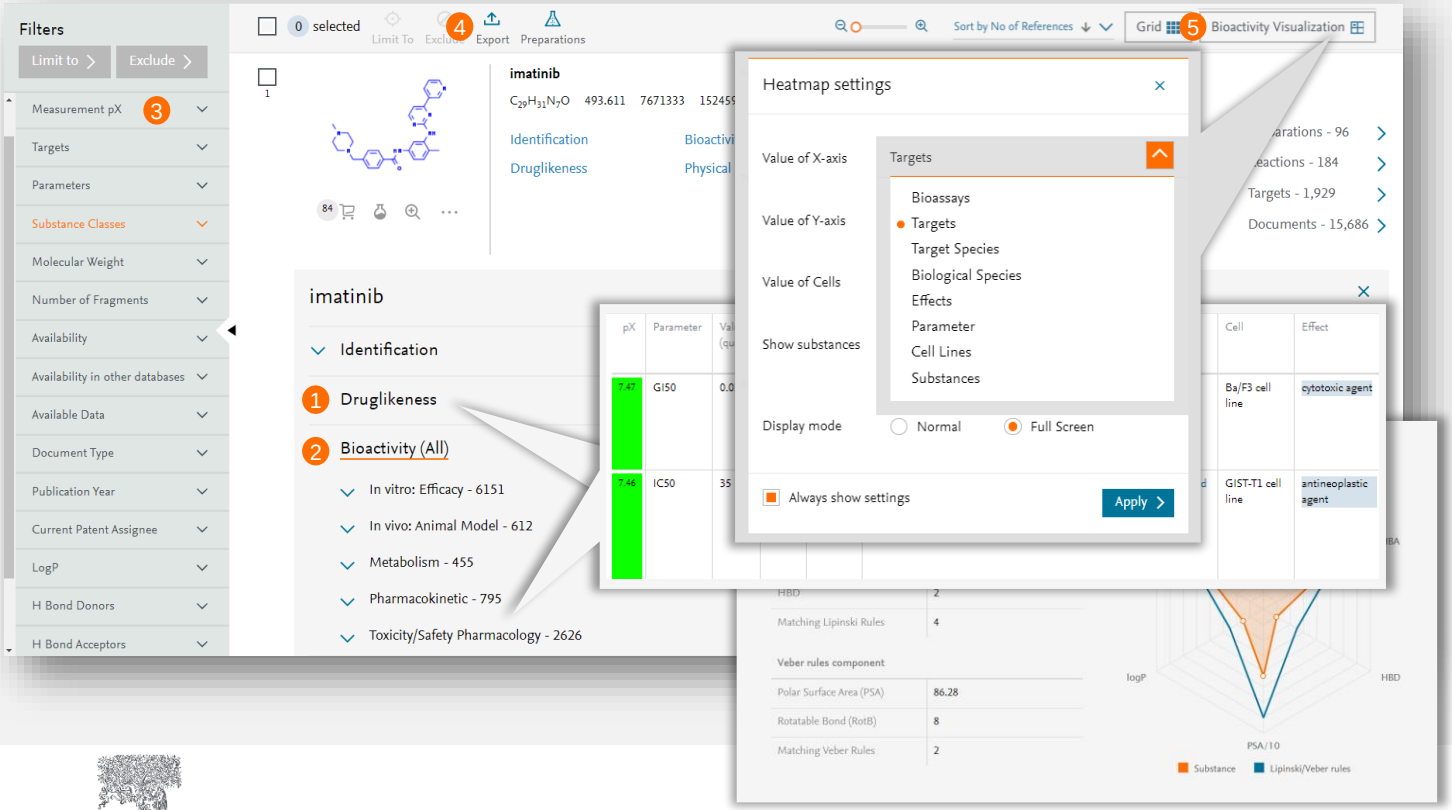
# Easy access to relevant bioactivity seamlessly integrated into Reaxys.com




1. Easily access Druglikeness profiles including Lipinski/Verber rule comparison
2. Review bioactivity data in the same window to make informed decisions more rapidly
3. Additional relevant filters to optimize your search
4. Export your Bioactivity data insights in multiple formats (PDF, DOC, XLS, XML, RD, SD) for further analysis
5. The Bioactivity visualization feature, lets take a closer look…

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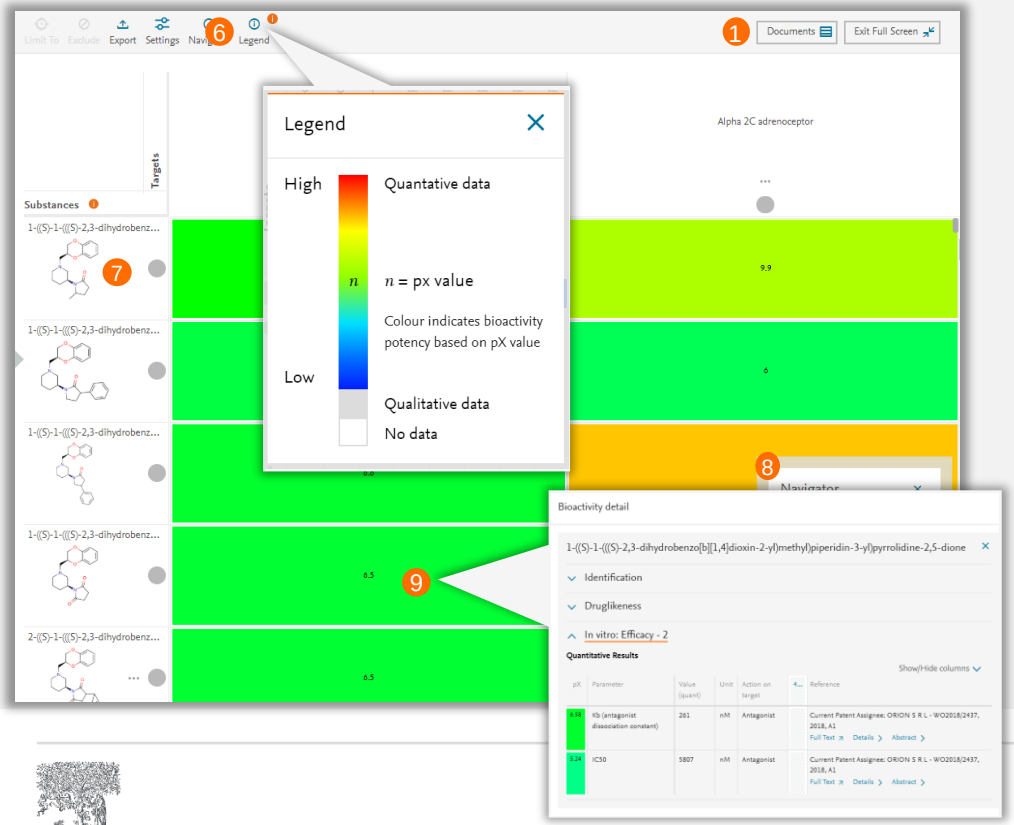
Reaxys®

# Reaxys' bioactivity visualization feature enables easy comparison of relevant data




6 Access the legend for a quick overview of the potency scale

7 View the chemical structures whilst reviewing the data for quick SAR analysis

8 Evaluate large datasets with an easy to use Navigation bar

9 Click a cell to access all the details for a specific record

10 Seamlessly go between the heatmap and relevant documents for further assessment

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# Summary: Reaxys for every R&D organization

Impact of Technology-driven data extraction with intelligent AI-based tools

- Cost, time-effective, sustainable end-product; stay ahead of competitors
- Consistent cost monitoring of the ongoing project (ROS)
- Stay ahead on competitive intelligence and novelty search use case
- Medicinal chemistry database for innovative drug discovery
- Acceleration of business growth to the next level

# Our information security standards are certified

Reaxys has obtained the ISO 27001 Information Security System Management certification

**Your confidentiality is our key priority**

You can trust Reaxys to confidently perform searches on proprietary research to strengthen your IP portfolio.

- ✓ Reaxys maintains certified high standards for security practices
- ✓ Reaxys continuously improves its information security practices


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