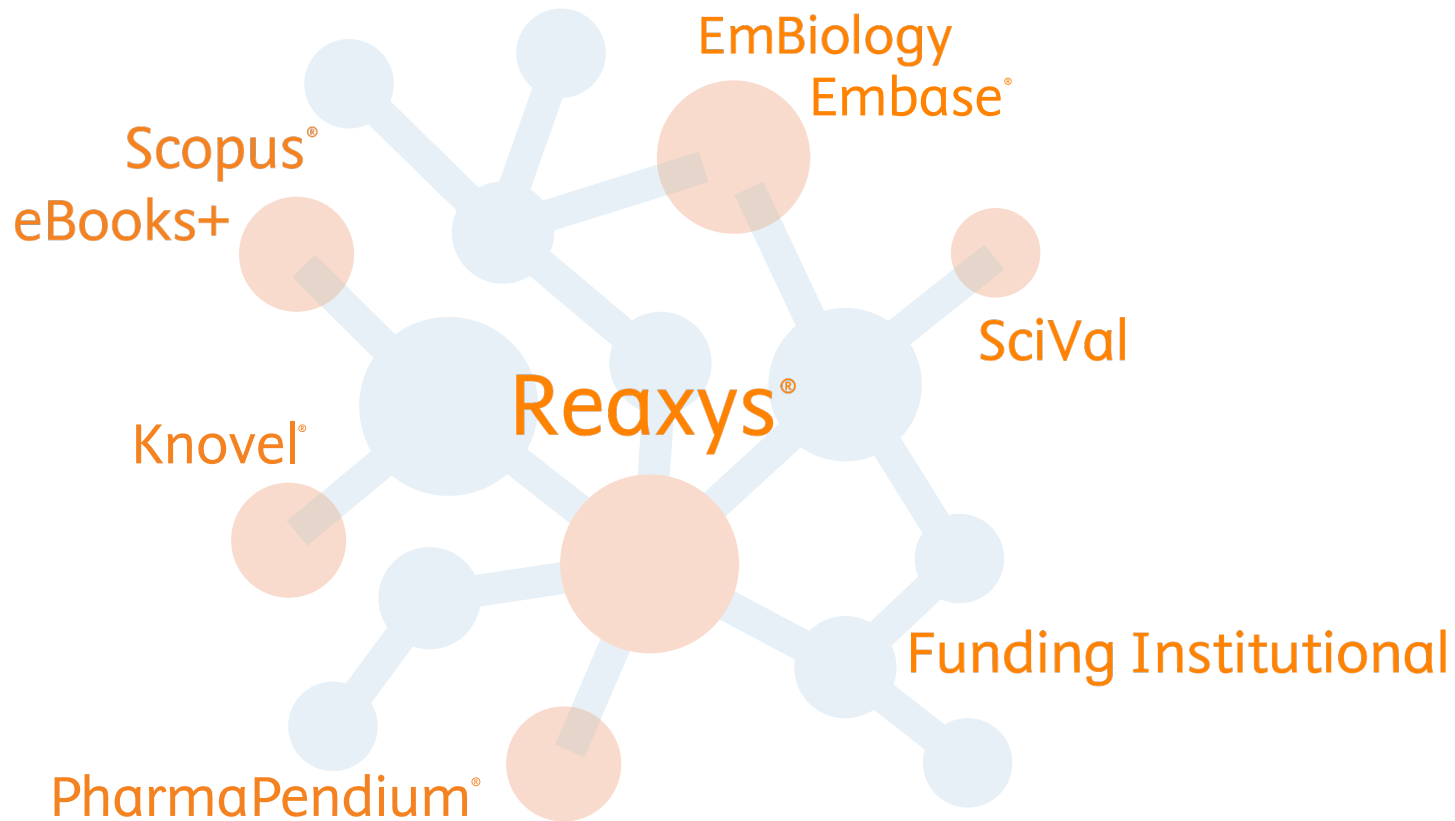




The Elsevier's Chemistry ecosystem

8th July 2023
Marta Da Pian





The research discovery journey

SciVal & Funding Institutional

Understanding the area trends, the main funders and the main players

Scopus & eBooks & Knovel

Getting to now the topic and the researchers involved

Reaxys

Deep dive into the compounds and the process involved

PharmaPendium & Reaxys Bioactivity

Understanding the potential bioactivity

Embiology & Embase

Monitoring Adverse reaction and implication into specific pathway.



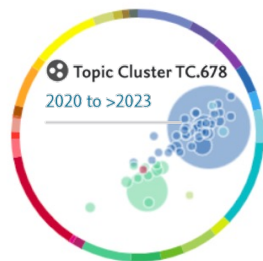
Carbohydrates

From mono to poly saccharides

Topics trends, fundings and main players

Topic overview - SciVal

Glycosylation: Glycosides: Carbohydrates



Overall research performance

1,833
Scholarly Output ⓘ



[View list of publications](#)

0.60
Field-Weighted Citation Impact ⓘ



306
International Collaboration ⓘ













30,281
Views Count ⓘ

7,694
Citation Count ⓘ

37.324 ▼
Topic Prominence percentile ⓘ



[Calculation breakdown](#)

Countries/Regions	Output ↓	Views Count ▼	Citation Impact ▼	Citation Count ▼
 China	512	9,304	0.76	2,531
 United States	290	3,918	0.68	1,616
 India	205	2,389	0.43	596
 Japan	205	4,328	0.58	687
 Germany	110	1,839	0.75	762
 France	79	1,402	0.68	334
 Russian Federation	69	1,073	0.31	143
 Italy	58	1,353	0.81	302
 Canada	47	508	0.50	138
 South Korea	47	707	0.41	164

Policy Impact - SciVal



8

Policy Cited Scholarly Output ⓘ

6

Citing Policy Documents ⓘ

4

Policy Bodies

Scholarly output

UN sustainable development goals: How can sustainable/green chemistry contribute?

Green chemistry as a source of sustainable innovations in the cosmetic industry.

Hitce, J., Xu, J., Brossat, M. and 4 more

Publication Year	2018
Scopus Source	Current Opinion in Green and Sustainable Chemistry · Volume 13, Pages 164-169
Topic	T.57201 C-Glycoside, 3-Hydroxybutanal, Carbohydrates
SDGs	SDG 8: Decent Work and Economic Growth (2022), SDG 9: Industry, Innovation and Infrastructure (2022)

[View Policy Document Mentions \(3\)](#) [More actions](#) ▾

Scholarly output

A preliminary study for evaluating the dose-dependent effect of D-allulose for fat mass reduction in adult humans: A randomized, double-blind, placebo-controlled trial.

Han, Y., Kwon, E.-Y., Yu, M.K. and 5 more

Publication Year	2018
Scopus Source	Nutrients · Volume 10, Issue 2
Topic	T.17184 Psicose, Tagatose, Allose
SDGs	SDG 3: Good Health and Well-being (2022)



Policy document

Global Chemicals Outlook II - From Legacies to Innovative Solutions: Implementing the 2030 Agenda for Sustainable Development

[United Nations Environment Programme](#)

Publication Date	January 01, 2019
Policy Body Type	Intergovernmental Organisation
Languages	English

[View Policy Document](#) [View Policy Cited Scholarly Output at Topic Cluster \(1\)](#)



Policy document

Scaling up Collaborative Action under the 2030 Agenda for Sustainable Development - Global Chemicals Outlook II Part V

[United Nations Environment Programme](#)

Publication Date	January 01, 2019
Policy Body Type	Intergovernmental Organisation
Languages	English

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Funding Trends - SciVal

27,538,418

Annualized Awards Value
(USD) ⓘ



[Value allocation details](#)

15,130,136

Awards Value
(USD) ⓘ



57

Awards Count



[View list of Awards](#)

75,364

Median amount per Award
(USD)



10

Funding Bodies



[View Funding Bodies](#)

44

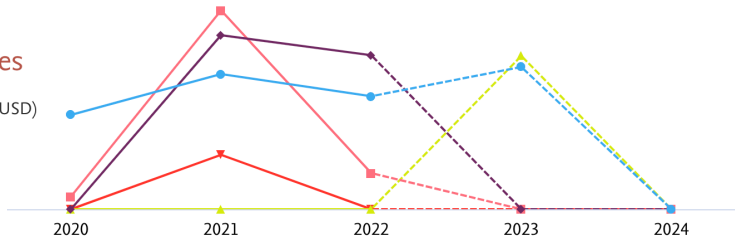
Awarded Institutions



[View Institutions](#)

Funding Bodies

Top 5 by Awards Value (USD)

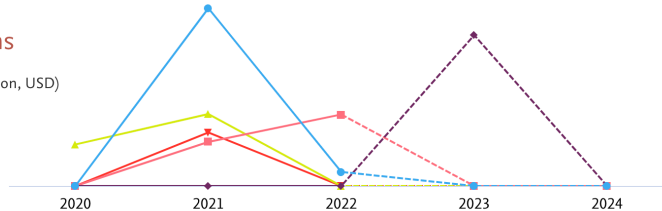


Funding Body	Awards Value (USD)
National Science Foundation	5,409,191
National Institutes of Health	3,661,249
Japan Society for the Promotion of Science	2,764,113
Schweizerischer Nationalfonds zur Förderung der Wissenschaftlichen Forschung	1,710,778
Royal Society Te Apārangi	607,031

Most Funded Institutions

Top 5 by Awards Value (estimated allocation, USD)

ⓘ Learn more about Awards Value



Institution	Awards Value (estimated allocation, USD)	Awards Count
Osaka University	2,176,231	4
University of Geneva	1,710,778	1
Northeastern University	1,310,678	2
Tufts University	1,286,353	2
University of Canterbury	607,031	1

[> Analyze all Funded Institutions](#)

Funding Opportunities – Funding Institutional



9 Funding opportunities

carbohydrate × [Clear all](#)

[Save search](#) and find opportunities faster next time.

All ∨ 0 selected ☆ Track ↻ Share 📧 Send to Pure ⋮

Sorted by [Relevance](#) ∨

Derek Horton Award in Industrial **Carbohydrate** Chemistry

[American Chemical Society](#) • Recognition prizes

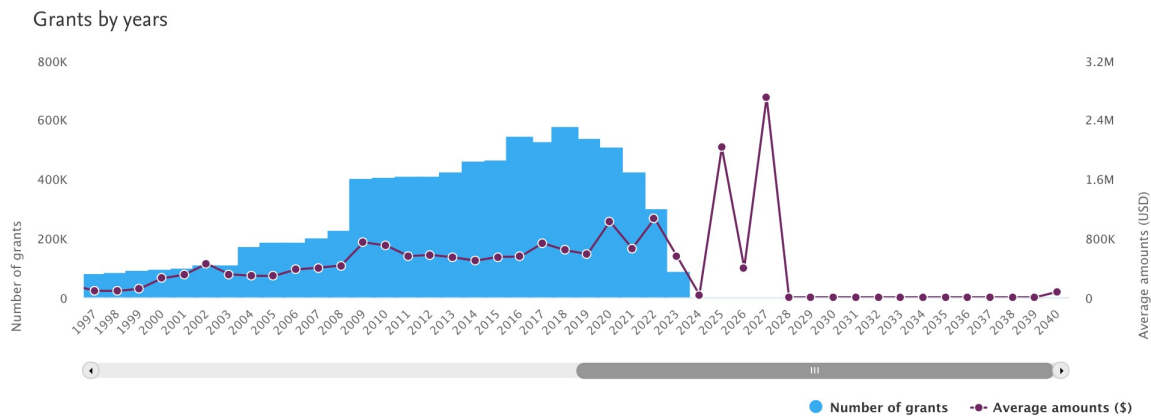
*The Derek Horton Award in Industrial **Carbohydrate** Chemistry acknowledges distinguished achievements in and outstanding contributions to industrial **carbohydrate** chemistry. ... [Read more](#)*

[↻](#) Recurring For members only

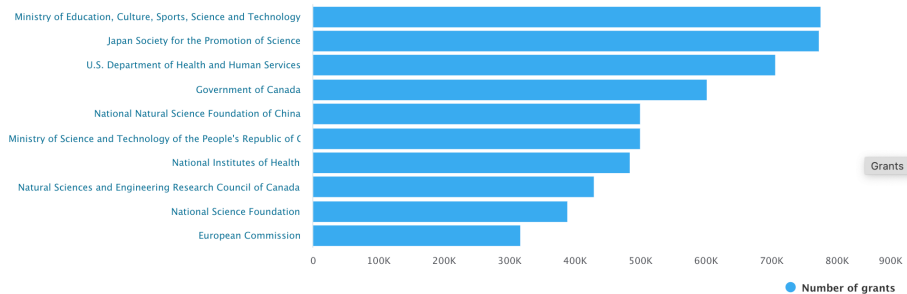
Deadline in about 24 days Application, 31-Jul-2023 ⓘ

Up to 1,500 USD
with total funding
of 4,000 USD

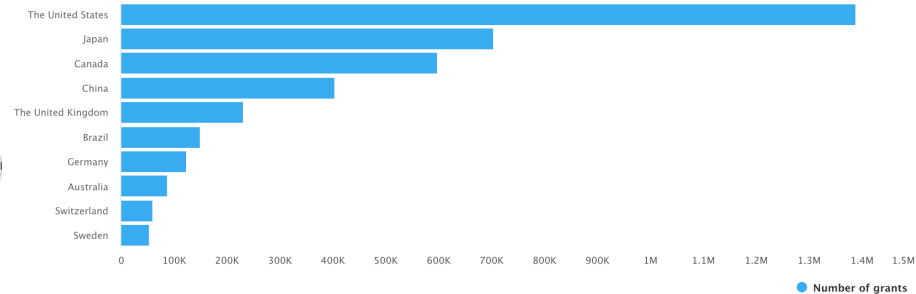
Awarded Grants – Funding Institutional



Grants by funders



Grants by awardee institution countries/regions



Topics definition - eBooks



Carbohydrate

Carbohydrate sugar chains, or glycans, are a major class of biological molecules.

From: [Drug Discovery Today](#), 2008

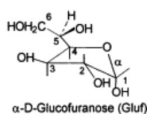
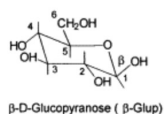
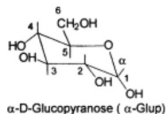
Related terms:

[Biomass](#), [Polysaccharide](#), [Graphene](#),
[Amino Acid](#), [Aqueous Solution](#)

Sample Preparation in Chromatography

Serban C. Moidoveanu, Victor David, in
[Journal of Chromatography Library](#), 2002

Derivatization of the OH groups in carbohydrates
Carbohydrates (sugars or saccharides) contain in their molecule carbonyl and **hydroxyl** (aldehyde in **aldoses** or ketone in ketoses) groups. Carbohydrate **derivatization** involving both types of functionalities is further discussed in Section 19.9. Also, aspects regarding sample preparation for the analysis of polymeric carbohydrates are discussed in Chapter 20. Carbohydrates commonly exist in their **hemiacetal** form, and in aqueous solutions the free carbonyls are present only at very low concentrations. For this reason, carbohydrate derivatization is most frequently done at their OH groups, using reagents similar to those for other alcohols.



Advances in polymeric materials for modified atmosphere packaging (MAP)

T.K. Goswami, S. Mangaraj, in
[Multifunctional and Nanoreinforced Polymers for Food Packaging](#), 2011

8.4 Post-harvest pathology of fruits and vegetables

Vegetables have more available water, less **carbohydrates** (sugars) and higher pH (near to neutral) than fruits (Manay and Shadaksharaswamy 2006). Due to having more available water and pH near to neutral, bacteria are the pre dominant microflora in vegetables. The common spoilage bacteria are *Erwina* spp., which cause bacterial rots in vegetables. The pH of the fruits is below the level to support bacterial growth. Molds and yeasts (fungi) are major main sources of infection that may occur during growing and post-harvest handling of produce (Hotchkiss 1989; Saltveit 1996; Rediers *et al.* 2009). Bacteria gain entry through wounds or natural openings (such as stomata, lenticels, or hydathodes) and multiply in the spaces between plant cells (Tomas-Barberan *et al.* 1997; Lu Shengmin 2009).

Main players in chemistry (last 5ys) - Scopus



Filters [Clear all](#)

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Range Individual

- Limited to 2023 652
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- Limited to 2021 1,075
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- Pharmacology, Toxicology and Pharmaceutics 657

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Article title, Abstract, Keywords

Search documents *

carbohydrate?

Document title	Authors	Source	Year	Citations
Review Catalytic Conversion of Carbohydrates to Initial Platform Chemicals: Chemistry and Sustainability	Mika, L.T., Cséfalvay, E., Németh, Á.	Chemical Reviews, 118(2), pp. 505–613	2018	770
Show abstract SFX View at Publisher Related documents				
Article • <i>Open access</i> METLIN: A Technology Platform for Identifying Knowns and Unknowns	Guijas, C., Montenegro-Burke, J.R., Domingo-Almenara, X., ... Benton, H.P., Siuzdak, G.	Analytical Chemistry, 90(5), pp. 3156–3164	2018	576
Show abstract SFX View at Publisher Related documents				
Review Catalytic oxidation of carbohydrates into organic acids and furan chemicals	Zhang, Z., Huber, G.W.	Chemical Society Reviews, 47(4), pp. 1351– 1390	2018	377
Show abstract SFX View at Publisher Related documents				
Review Fluorogenic probes for disease-relevant enzymes	Zhang, J., Chai, X., He, X.-P., ...Yoon, J., Tian, H.	Chemical Society Reviews, 48(2), pp. 683– 722	2019	367

Main players in chemistry (last 5ys) - Scopus



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- Yu, P. 13
- Rovira, C. 13
- Demchenko, A.V. 13
- Jayaraman, N. 12
- Pedersen, C.M. 11
- Misra, A.K. 11
- Lindhorst, T.K. 11
- Guttman, A. 11
- Delbianco, M. 11
- Corzana, F. 11
- Codée, J.D.C. 11
- Ardá, A. 11

Source	Year	Citations
Chemical Reviews, 118(2), pp. 505–613	2018	770
Analytical Chemistry, 90(5), pp. 3156–3164	2018	576
Chemical Society Reviews, 47(4), pp. 1351–1390	2018	377
Chemical Society Reviews, 48(2), pp. 683–722	2019	367

Document title

Review

Catalytic Conversion of Carbohydrate Chemicals: Chemistry and Sustainability

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Article • [Open access](#)

METLIN: A Technology Platform for Identifying Unknowns

[Show abstract](#) [SFX](#)

Review

Catalytic oxidation of carbohydrates in chemical reactions

[Show abstract](#) [SFX](#)

Review

Fluorogenic probes for disease-relevant targets

Author profile - Scopus



Seeberger, Peter H.

[Freie Universität Berlin, Berlin, Germany](#) [7005614371](#) [Connect to ORCID](#) [View more](#)

31,621

Citations by **18,461 documents**

631

Documents

89

h-index [View *h*-graph](#)



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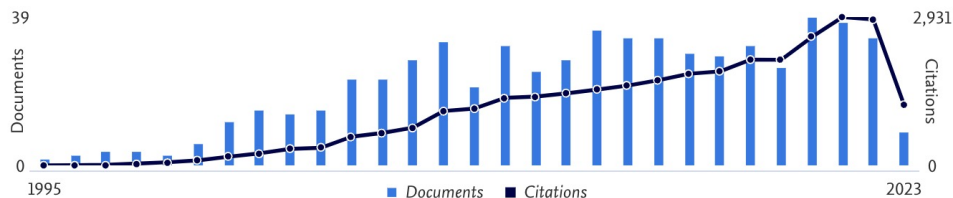
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Document & citation trends



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Most contributed Topics 2018–2022 [i](#)

Thioglycosides; Glycosylation; Oligosaccharide

36 documents

Alkene; Cross-coupling Reactions; Photocatalysis

9 documents

Mass Spectrometry; Glycomics; Glycosylation

8 documents

[View all Topics](#)

631 Documents

Cited by 18,461 documents

18 Preprints

1,429 Co-Authors

72 Topics

5 Awarded Grants

Beta



Carbohydrates

From mono to poly saccharides

Diving into the chemistry

D-glucuronic acid substructures - Reaxys



24,416 Substances out of 25,484 Documents, containing 45,084 Reactions, 1,024 Targets

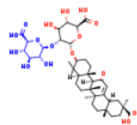
Reaxys - 24,416

0 selected Limit To Exclude Export Preparations

Sort by No of References ↓

Grid

Bioactivity Visualization



47

glycyrrhizin

$C_{42}H_{62}O_{16}$ 822.945 77922 1405-86-3

Identification

Bioactivity (All)

Spectra - 90

Preparations - 9 >

Druglikeness

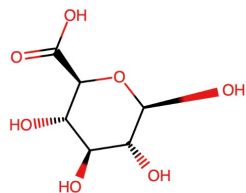
Physical Data - 37

Other Data - 463

Reactions - 155 >

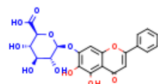
Targets - 96 >

Documents - 5,835 >



×

On heteroatoms



62

baicalin

$C_{21}H_{18}O_{11}$ 446.367 70480 21967-41-9

Identification

Bioactivity (All)

Spectra - 174

Preparations - 7 >

Druglikeness

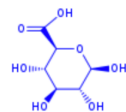
Physical Data - 111

Other Data - 295

Reactions - 200 >

Targets - 202 >

Documents - 823 >



39

D-glucuronic acid

$HOC(O)CH(CHOH)4O$ 194.141 1427744 Retrieve CAS RN

Identification

Bioactivity (All)

Spectra - 50

Preparations - 124 >

Druglikeness

Physical Data - 33

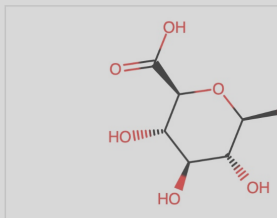
Other Data - 12

Reactions - 230 >

Targets - 6 >

Documents - 522 >

Glycyrrhizin Physical data - Reaxys



On heteroatoms

24,416 Substances out of 25,484 Documents, containing 45,084 Reactions, 1,024 Targets

Reaxys - 24,416

Physical Data - 37

Optical Rotatory Power - 5

Show/Hide columns ▾

Type (Optical Rotatory Power)	Concentration (Optical Rotatory Power)	Solvent (Optical Rotatory Power)	Optical Rotatory Power, deg	Wavelength (Optical Rotatory Power), nm	Temperature (Optical Rotatory Power), °C	Reference
[alpha]	1 g/100ml	methanol	52	589	20	Yang, Yong-An; Tang, Wen-Jian; Zhang, Xin; Yuan, Ji-Wen; Liu, Xin-Hua; Zhu, Hai-Liang [<i>Molecules</i> , 2014 , vol. 19, # 5, p. 6368 - 6381] Full Text Cited 29 times Details Abstract >
[alpha]	1.0 g/100ml	pyridine	61.7	589	20	Saito; Sumita; Kanda; Sasaki [<i>Chemical and Pharmaceutical Bulletin</i> , 1994 , vol. 42, # 5, p. 1016 - 1027] Full Text Cited 24 times Details Abstract >
[alpha]	1.5 g/100ml	ethanol	49.5	589	20	Ichikawa; Ishida; Sakiya; Akada [<i>Chemical and Pharmaceutical Bulletin</i> , 1984 , vol. 32, # 9, p. 3734 - 3738] Full Text Cited 51 times Details Abstract >
[alpha]	c=1	ethanol	46.2	589	17	Lythgoe; Trippett [<i>Journal of the Chemical Society</i> , 1950 , p. 1983,1988] Full Text Details >
[alpha]	p=3	ethanol	58.6	589	20	Voss; Klein; Sauer [<i>Chemische Berichte</i> , 1937 , vol. 70, p. 131] Full Text Details >

Druglikeness

Physical Data - 55

Other Data - 12

- Preparations - 9 [>](#)
- Reactions - 155 [>](#)
- Targets - 96 [>](#)
- Documents - 5,835 [>](#)
- Preparations - 7 [>](#)
- Reactions - 200 [>](#)
- Targets - 202 [>](#)
- Documents - 823 [>](#)
- Preparations - 124 [>](#)
- Reactions - 230 [>](#)
- Targets - 6 [>](#)
- Documents - 522 [>](#)

Glycyrrhizin Spectroscopical data - Reaxys



24,416 Substances out of 25,484 Documents, containing 45,084 Reactions, 1,024 Targets

Reaxys - 24,416

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Sort by No of References ↓

Grid

Bioactivity Visualization

glycyrrhizin

Spectra - 90

UV/VIS Spectroscopy - 13

Description (UV/VIS Spectroscopy)	Solvent (UV/VIS Spectroscopy)	Comment (UV/VIS Spectroscopy)	Absorption Maxima (UV/VIS), nm	Ext./Abs. Coefficient, $\text{l} \cdot \text{mol}^{-1} \cdot \text{cm}^{-1}$	Reference
	ethanol		249	10232	Baltina; Kondratenko; Mustafina; Flekhter; Murinov; Davydova; Zarudii; Ismagilova; Tolstikov [Pharmaceutical Chemistry Journal, 2001, vol. 35, # 1, p. 40 - 44] Full Text Cited 6 times Details Abstract
Spectrum	H2O	200 - 300 nm			Hada; Inagaki [Yakugaku Zasshi/Journal of the Pharmaceutical Society of Japan, 1958, vol. 78, p. 795] [Chem.Abstr., 1958, p. 17357] Full Text Details
Spectrum	aq. ethanol	200 - 300 nm			Hada; Inagaki [Yakugaku Zasshi/Journal of the Pharmaceutical Society of Japan, 1958, vol. 78, p. 795] [Chem.Abstr., 1958, p. 17357] Full Text Details

On heteroatoms



Identification

Bioactivity (All)

Spectra - 50

Druglikeness

Physical Data - 33

Other Data - 12

39

124 >

Reactions - 230 >

Targets - 6 >

Documents - 522 >

Glycyrrhizin Other data - Reaxys



24,416 Substances out of 25,484 Documents, containing 45,084 Reactions, 1,024 Targets

Reaxys - 24,416

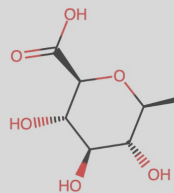
Other Data - 463

Use - 443

Isolated from Natural Source - 20

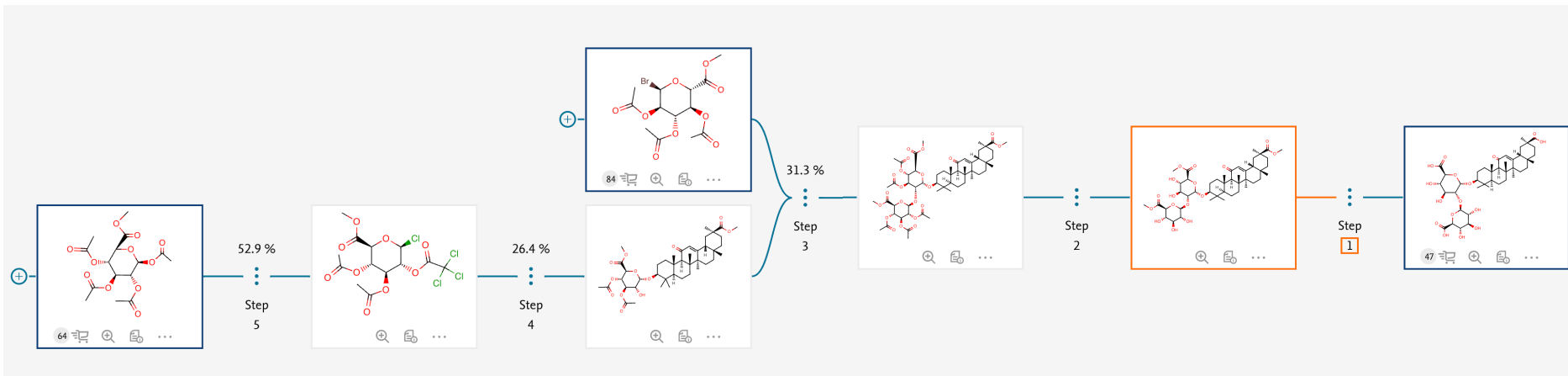
Show/Hide columns

Isolated from Natural Source	Location	Reference
Glycyrrhiza uralensis; purchased from the Tong-Ren-Tang Company (Beijing, China)		Zhu, Dafu; Su, Haixia; Ke, Changqiang; Tang, Chunping; Witt, Matthias; Quinn, Ronald J.; Xu, Yechun; Liu, Jia; Ye, Yang [Journal of Pharmaceutical and Biomedical Analysis , 2022, vol. 209, art. no. 114538] Full Text Cited 16 times Details Abstract
roots of Glycyrrhiza uralensis Fisch. ex DC.; originated from Hangjinqi, Inner Mongolia		Tsai, Ming-Shao; Shih, Wei-Tai; Yang, Yao-Hsu; Lin, Yu-Shih; Chang, Geng-He; Hsu, Cheng-Ming; Yeh, Reming-Albert; (...) Shen, Rou-Chen; Wu, Ching-Yuan [Biomedicine and Pharmacotherapy , 2022, vol. 149, art. no. 112802] Full Text Cited 1 times Details Abstract
roots of Glycyrrhiza uralensis; purchased at a commercial herbal market, Human-herb, Gyeongsan, Gyeongbuk, South Korea		Cho, MyoungLae; Jeong, Geum Seok; Kang, Myung-Gyun; Kim, Hoon; Lee, Joon Yeop; Lee, Sang Ryong; Park, Daeui [Molecules , 2020, vol. 25, # 17] Full Text Cited 19 times Details Abstract
roots of Liquorice; collected in farm of Faculty of Pharmacy, Mansoura University, Mansoura, Egypt, August 2014	supporting information	Abdel Bar, Fatma M.; Elimam, Diaaeldin M.; Mira, Amira S.; El-Senduny, Fardous F.; Badria, Farid A. [Natural Product Research , 2019, vol. 33, # 18, p. 2591 - 2599] Full Text Cited 14 times Details Abstract
root of licorice; obtained from Derech Hatavinim (also known as Havat Hatavinim Bethlehem of the Galilee's Specialties, Israel)	Page/Page column 14-15	Current Patent Assignee: ALLIED BIONUTRITION - WO2019/229739, 2019, A1 Full Text Details Abstract



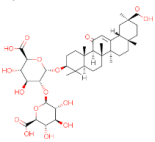
On heteroatoms

Glycyrrhizin Synthesis - Reaxys



Step 1	Step 2	Step 3	Step 4	Step 5						
<table border="1"> <thead> <tr> <th>Conditions</th> <th>Yield</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>With potassium hydroxide In ethanol; water for 2h; Heating; Yield given;</td> <td></td> <td> Saito; Sumita; Kanda; Sasaki [Chemical and Pharmaceutical Bulletin, 1994, vol. 42, # 5, p. 1016 - 1027] Full Text Cited 24 times Details > </td> </tr> </tbody> </table>					Conditions	Yield	Reference	With potassium hydroxide In ethanol; water for 2h; Heating; Yield given;		Saito; Sumita; Kanda; Sasaki [Chemical and Pharmaceutical Bulletin, 1994, vol. 42, # 5, p. 1016 - 1027] Full Text Cited 24 times Details >
Conditions	Yield	Reference								
With potassium hydroxide In ethanol; water for 2h; Heating; Yield given;		Saito; Sumita; Kanda; Sasaki [Chemical and Pharmaceutical Bulletin, 1994, vol. 42, # 5, p. 1016 - 1027] Full Text Cited 24 times Details >								
Step 1	Step 2	Step 3	Step 4	Step 5						
<table border="1"> <thead> <tr> <th>Conditions</th> <th>Yield</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>With sodium methylate In methanol Ambient temperature;</td> <td></td> <td> Saito; Sumita; Kanda; Sasaki [Chemical and Pharmaceutical Bulletin, 1994, vol. 42, # 5, p. 1016 - 1027] Full Text Cited 24 times Details > </td> </tr> </tbody> </table>					Conditions	Yield	Reference	With sodium methylate In methanol Ambient temperature;		Saito; Sumita; Kanda; Sasaki [Chemical and Pharmaceutical Bulletin, 1994, vol. 42, # 5, p. 1016 - 1027] Full Text Cited 24 times Details >
Conditions	Yield	Reference								
With sodium methylate In methanol Ambient temperature;		Saito; Sumita; Kanda; Sasaki [Chemical and Pharmaceutical Bulletin, 1994, vol. 42, # 5, p. 1016 - 1027] Full Text Cited 24 times Details >								

Glycyrrhizin Bioactivity - Reaxys

Substances	Targets	
glycyrrhizin 	●	High mobility g...rotein 2
	●	Corticoster... e 2 [human]
	●	Corticoster... e 1 [mouse]
	●	Corticoster... e 1 [human]
	●	11-beta-hydr... e (NADP+)
	●	epidermal gr... r receptor
	●	spike protein (S... navirus)
	●	Solute carrier ...mber 1B3
	●	Glucagon recep...peptide)
	●	Hyaluronidase (PR
	●	OATP [rat]
	●	Acetylcholineste... ctricus]
	●	High mobility g...rotein 1
	●	ABC transporter... r 4 [rat]
	●	Solute carrier ...mber 1B1
	●	Sentrin-specific...otease 1
	●	Protein X
	●	Protein kinase C (peptide)
	●	Multidrug ... n 1 [human]
	●	Mitogen-acti... n kinase 8
●	Membrane-as... ponent 1	
●	3-hydroxy-3-m... onovani]	
●	enzyme	
●	ABC transp... y member 2	
●	Pancreatic ribonuclease	
●	Solute carrier ...mber 1B2	
●	High mobil...n 1 [human]	
●	ABC transp... r 3 [human]	
●	10	
●	9.4	
●	8.5	
●	8.2	
●	7.9	
●	7	
●	6	
●	5.7	
●	5.7	
●	5.5	
●	5.2	
●	5.2	
●	5.1	
●	5.1	
●	5	
●	5	
●	5	
●	5	
●	5	
●	5	
●	5	
●	4.9	
●	4.9	
●	4.8	
●	4.7	
●	4.7	
●	4.7	

Glycyrrhizin Bioactivity - Reaxys

Substances

glycyrrhizin



Targets	10	9.4	8.5	8.2	7.9	7	6	5.7	5.7	5.5
High mobility g...rotein 2										
Corticoster... e 2 [human]										
Corticoster... e 1 [mouse]										
Corticoster... e 1 [human]										
11-beta-hydr... e (NADP+)										
epidermal gr... r receptor										
spike protein (S... navirus)										
Solute carrier ...mber 1B3										
Glucagon recep...peptide										
Hyaluronidase (PK										
OATP [rat]										
Acetylcholineste... ctricus]										
High mobility g...rotein 1										
ABC transporter... r 4 [rat]										
Solute carrier ...mber 1B1										
Sentrin-specific...otease 1										
Protein X										
Protein kinase C (peptide)										
Multidrug ... n 1 [human]										
Mitogen-acti... n kinase 8										
Membrane-as... ponent 1										
3-hydroxy-3-m... onovani]										
enzyme										
ABC transp... y member 2										
Pancreatic ribonuclease										
Solute carrier ...mber 1B2										
High mobil...n 1 [human]										
ABC transp... r 3 [human]										

Bioactivity detail ✕

Quantitative Results







Show/Hide columns ▼

pX	Parameter	Value (qual)	Value (quant)	Unit	Action on target	Target	Cell	Dose	Effect	Reference
5.73	Ki (inhibition constant)	=	1870	nM	Inhibitor	Glucagon receptor (peptide):Wild				Kurukulasuriya; Link; Madar; Pei; Richards; Szczepankiewicz Current Medicinal Chemi 10, # 2, p. 123 - 153 Full Text ↗ Cited 88 times ↗ Details

Deep dive into the receptor - Pharmapendium

Glucagon Receptor

Drugs	Active Substance	Mechanism Of Action ⓘ	Primary/Secondary	Source
Dasiglucagon Hydro...	Dasiglucagon	Agonist	Primary	FDA
Glucagon	Glucagon	Agonist	Primary	EMA FDA
Glucagon Recombin...	-	-	Primary	MOSBY MEYLER
Glucagon Recombin...	Glucagon	Agonist	Primary	FDA

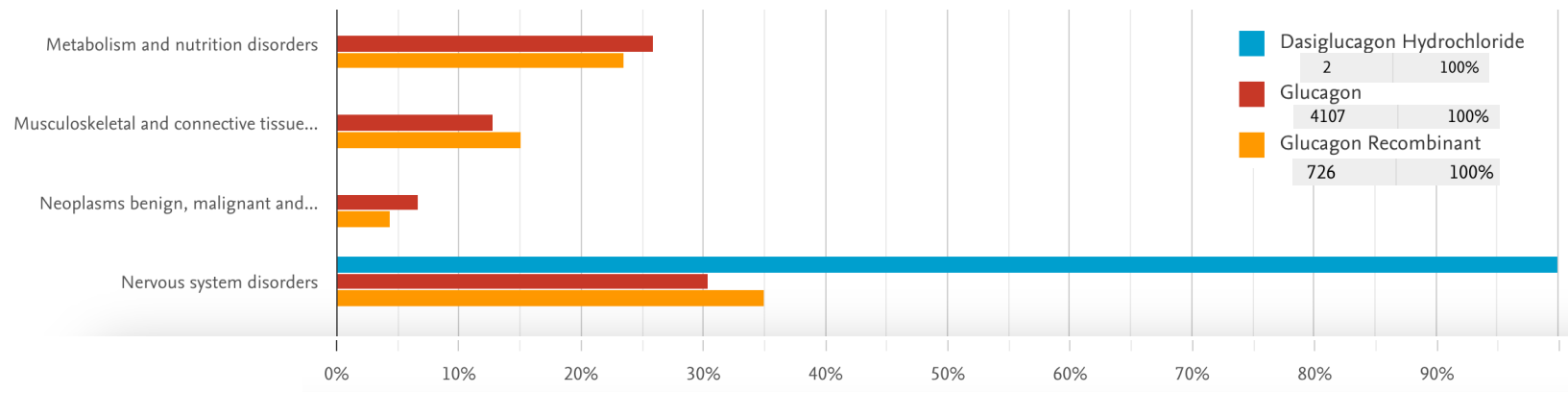
<p> Pharmacokinetic Data</p> <p>Clinical Data 1177 Preclinical Data 869 All Data 2046</p>	<p> Metabolizing Enz & Trans. Data</p> <p>Clinical Data 20 Preclinical Data 43 All Data 63</p>	<p> Drug Safety Data</p> <p>Clinical Data 2101 Preclinical Data 473 All Data 2574</p>
<p> Efficacy Data</p> <p>Clinical Data 5350 Preclinical Data 74</p>	<p> FAERS Data</p> <p>Post-Marketing Reports(AERS) 1038</p>	<p> Activity Data</p> <p>In vitro 165</p>

Pharmacokinetic Clinical data - Pharmapendium



Drug		Dose	Route	Parameter	Parameter Value	Source	Year
Glucagon Recombinant (Not radiolabelled)		0.25 mg	Intravenous	Cmax	37.0 ng/mL	<i>FDA approval package document:</i> Approval Package (Page:26) View Full Study PDF 980k	1998
Glucagon Recombinant (Not radiolabelled)		0.25 mg	Intravenous	Vd	18.5 L	<i>FDA approval package document:</i> Approval Package (Page:24) View Full Study PDF 1472k	1998
Glucagon (Not radiolabelled)		0.25-2 mg	Intravenous	T1/2	0.13h - 0.3h	<i>FDA approval package document:</i> Clinical Pharmacology and Biopharmaceutics Review (Page:12) View Full Study PDF 5222k	2019
Glucagon (Not radiolabelled)		0.25-2 mg	Intravenous	CL	59.0 L/h	<i>FDA approval package document:</i> Clinical Pharmacology and Biopharmaceutics Review (Page:12) View Full Study PDF 5222k	2019

FAERS - Pharmapendium



Glycyrrhizic Adverse drug reaction - Embase



'glycyrrhizic acid'/exp/mj/'adverse drug reaction','drug toxicity','drug interaction' OR 'glycyrrhizic acid-induced':de,ab,ti

241

Optimal Administration of Glycyrrhizin Avoids Pharmacokinetic Interactions With High-dose Methotrexate and Exerts a Hepatoprotective Effect

Mano Y., Abe K., Takahashi M., Higurashi T., Kawano Y., Miyazaki S., Maeda-Minami A.

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Glycyrrhizic Adverse drug reaction - Embase

'glycyrrhizic acid'/exp/mj/'adverse drug reaction','drug toxicity','drug interaction' OR 'glycyrrhizic acid-induced'/'de ab fi

Optimal Administration of Glycyrrhizin Avoids Pharmacokinetic Interactions With

Mano Y., Abe K., Takahashi M., Higurashi T., Kawano Y., Miyazaki S., Maeda-Minami A.

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Benefits of stronger Neo

Huang W.-C., Lin Y.-M., Kuo H.-T.

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Ferrous iron-induced for

Xu Z., Gao Z., Lu J., Wang T., Wan

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Drugs

- glycyrrhizic acid **Details ▶** 240
- unclassified drug **Details ▶** 46
- glycyrrhetic acid **Details ▶** 29
- alanine **Details ▶** 25
- aminotransferase **Details ▶** 21
- hydrocortisone **Details ▶** 20
- aspartate **Details ▶** 20
- aminotransferase **Details ▶** 20
- potassium **Details ▶** 20
- 11beta hydroxysteroid **Details ▶** 10

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Key subheadings

- adverse drug reaction **109**
- drug combination 86
- drug comparison 72
- drug interaction 38
- drug therapy 98
- special situation for pharmacovigilance 3
- unexpected outcome of drug treatment 0

Adverse drug reaction

type any adverse drug reaction (autocomplete) x

- all
- hypokalemia 14
- hypertension 12
- edema 7
- hyperaldosteronism 6
- side effect 6
- headache 5
- nausea 5
- peripheral edema 5
- drug hypersensitivity 4
- nausea and vomiting 4
- rash 4
- absence of side effects 3
- dizziness 3
- elevated blood pressure 3
- face edema 3
- fever 3
- gastrointestinal symptom 3
- heart palpitation 3
- muscle weakness 3
- pseudoaldosteronism 3
- pseudohyperaldosteronism 3
- thrombocytopenia 3

patoprotective Effect

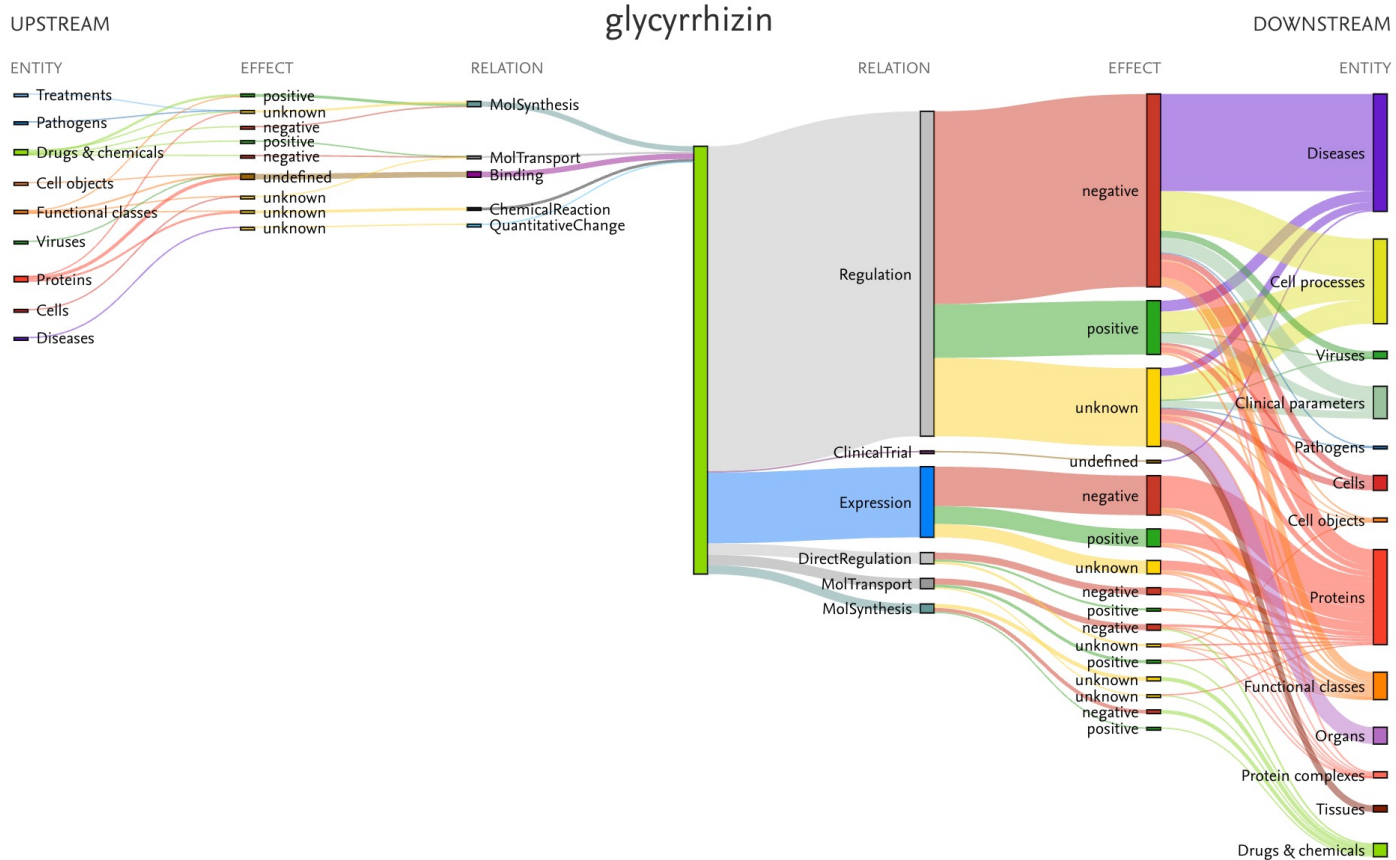
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Effect: ALL X

Relation Types: ALL X

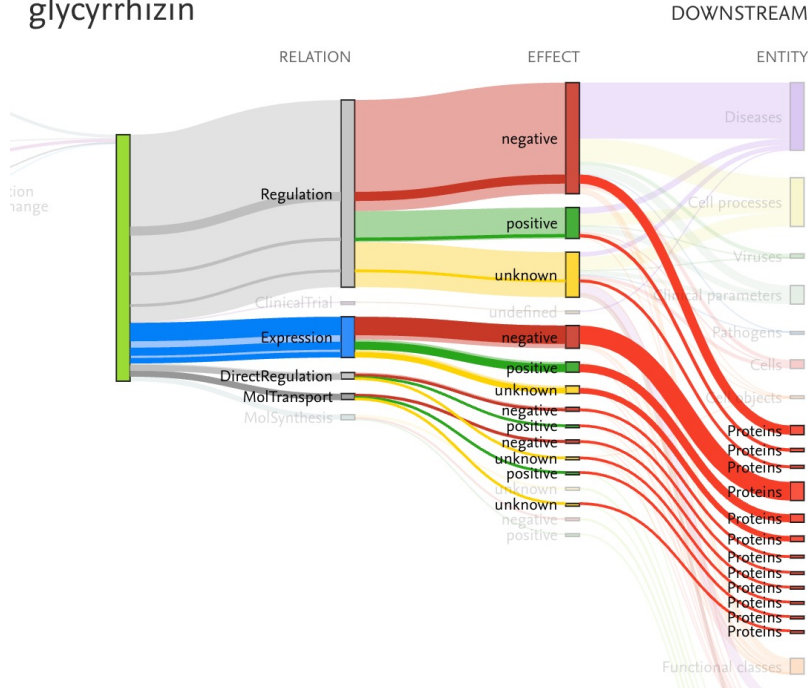
Direction: downstream X

Concept filters

Proteins: ALL X

615 results

glycyrrhizin



Glycyrrhizin prevents 3-nitropropionic acid-induced neurotoxicity by downregulating HMGB1/TLR4/NF-κB p65 signaling, and attenuating oxidative stress, inflammation, and apoptosis in rats.

2023

A.M. Gendy, A.E. El-Haddad, K.A. Ahmed, A. Soubh, H.M. El-Sadek, M.M. Amin, M.K. El-Sayed

[Relations: 2](#) [Abstract](#) [Full text](#)

Relation N°1

1 snippet ^

glycyrrhizin has a positive "Expression" relationship with BDNF.

[5 References](#)

Snippet 1 of 1

Furthermore, Glycyrrhizin switched the HMGB1/TLR4/NF-κB p65 signaling off, reduced IL-6, IL-β, TNF-α, caspase-3, and increased Bcl-2 as well as BDNF.

Relation N°2

1 snippet ^

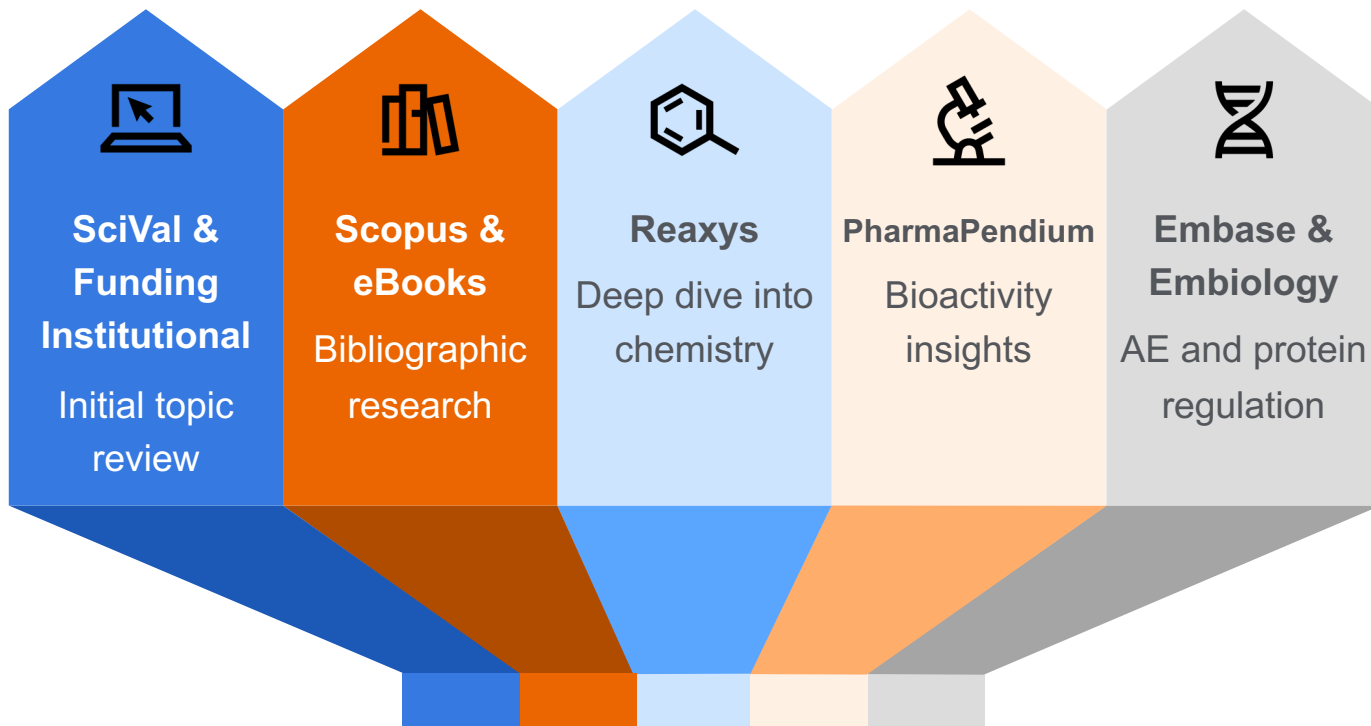
glycyrrhizin has a positive "Expression" relationship with BCL2.

[6 References](#)

Snippet 1 of 1

Furthermore, Glycyrrhizin switched the HMGB1/TLR4/NF-κB p65 signaling off, reduced IL-6, IL-β, TNF-α, caspase-3, and increased Bcl-2 as well as BDNF.

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