

BERN '25 **WIKIDATA**
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The LOTUS initiative and its links to WikiCite

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This session is recorded: Please mute your
microphone and camera when you're not speaking.

What is the LOTUS initiative?

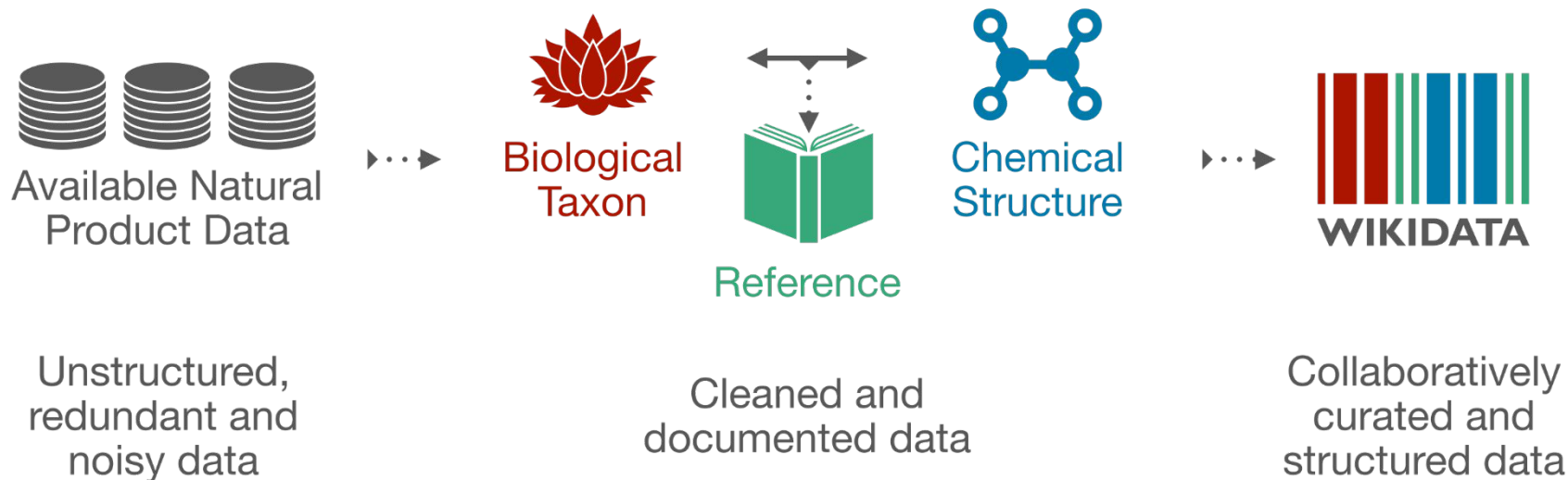


Image from

https://commons.wikimedia.org/wiki/File:Lotus_initiative_1_graphical_abstract.svg,

Wikimedia Commons contributors, [CC0](#)

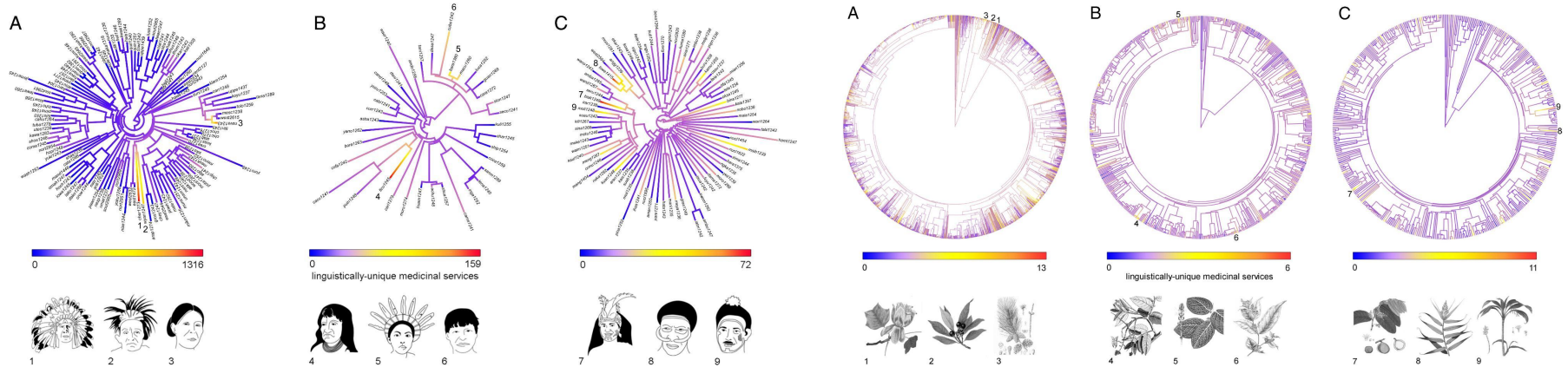
WIKIDATA
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The *why* of our initiative

Images from

<https://doi.org/10.1073/pnas.2103683118>

National Academy of Sciences. All rights reserved



“Our finding of high uniqueness in indigenous knowledge and strong coupling with threatened languages suggests that language loss will be even more critical to the extinction of medicinal knowledge than biodiversity loss”

R. Cámara-Leret, & J. Bascompte - *Language extinction triggers the loss of unique Medicinal knowledge*. *Proc. Natl. Acad. Sci. U.S.A.* 118 (24) e2103683118, <https://doi.org/10.1073/pnas.2103683118> (2021).

The *how* of our initiative

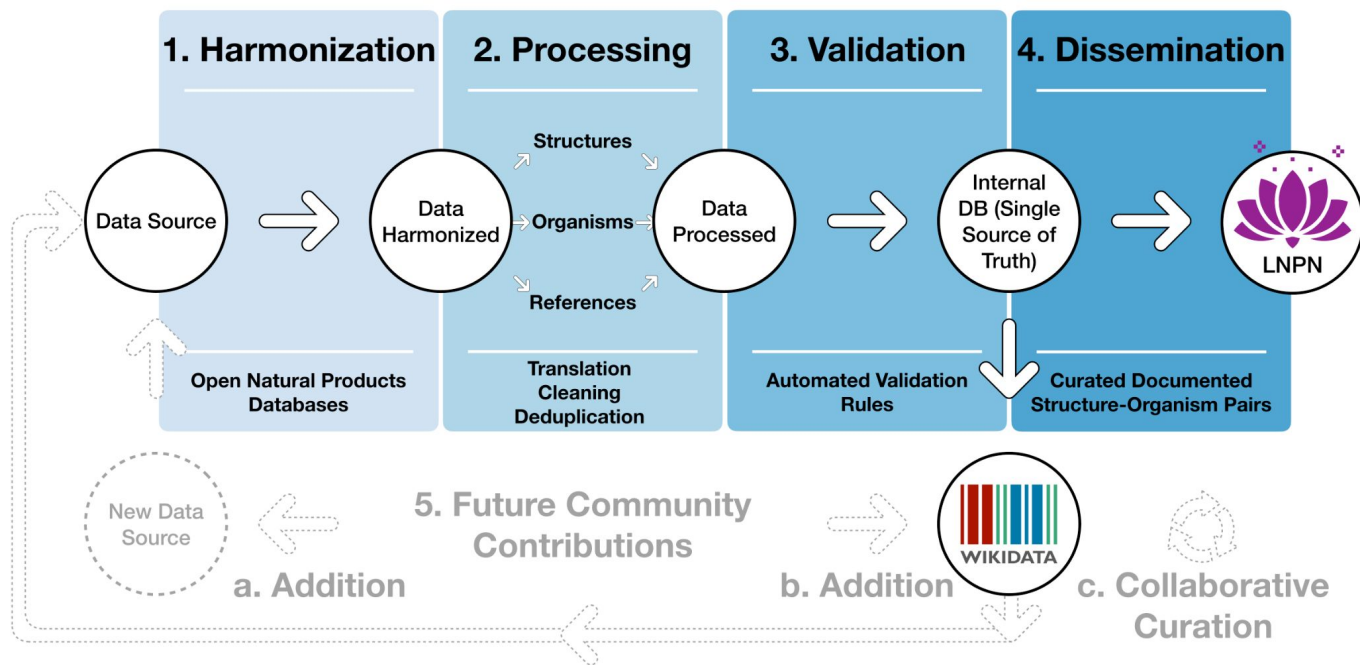


Image from

https://commons.wikimedia.org/wiki/File:Lotus_initiative_1_blueprint.svg,

Wikimedia Commons contributors, [CC0](#)

A simple example

	Chemical compound	Biological organism	Reference
Before curation	Cyathocaline	Stem bark of <i>Cyathocalyx zeylanica</i> CHAMP. ex HOOK. f. & THOMS. (Annonaceae)	Wijeratne E. M. K., de Silva L. B., Kikuchi T., Tezuka Y., Gunatilaka A. A. L., Kingston D. G. I., J. Nat. Prod., 58, 459-462 (1995).
After curation	VFIIVOHWCNHINZ-U HFFFAOYSA-N	<i>Cyathocalyx zeylanicus</i>	10.1021/NP50117A020

Table: Example of a referenced chemical compound-biological organism pair before and after curation

Table reproduced from
<https://doi.org/10.7554/eLife.70780>,
Rutz et al. [CC BY 4.0](#)

On Wikidata ([Q27265641](#))

found in taxon	Erythrina edulis	
	1 reference	
	stated in	Alkaloid-Bearing Plants and Their Contained Alkaloids. 1957-1968
	Erythrina smithiana	
	1 reference	
	stated in	Alkaloid-Bearing Plants and Their Contained Alkaloids. 1957-1968
	Erythrina americana	
	3 references	
	stated in	Alkaloids from six Erythrina species endemic to Mexico
	stated in	Erythrina Alkaloids. VIII. Studies on the Constitution of Erythramine and Erythraline
	stated in	Variation of Total Nitrogen, Non-protein Nitrogen Content, and Types of Alkaloids at Different Stages of Development in Erythrina americana Seeds†

Image from

<https://doi.org/10.7554/eLife.70780>,

Rutz et al. [CC BY 4.0](#)

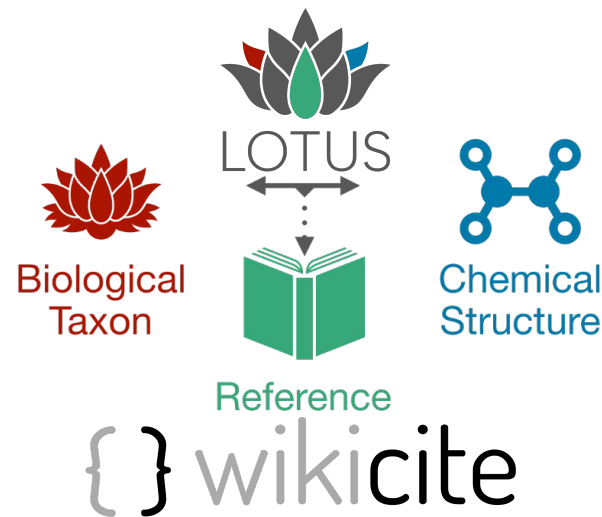
LOTUS items' statistics

On **2025-08-22**:

- **672,600** referenced chemical-taxon pairs
(<https://glever.cs.uni-freiburg.de/wikidata/wL9c9d>)
- **227,134** chemical entities
(<https://glever.cs.uni-freiburg.de/wikidata/ZNDowA>)
- **37,461** taxa (<https://glever.cs.uni-freiburg.de/wikidata/GoyWrU>)
- **91,385** references (<https://glever.cs.uni-freiburg.de/wikidata/gWabZJ>)
- **91,333** DOIs (<https://glever.cs.uni-freiburg.de/wikidata/F0MfJd>)
- **12,611** authors (<https://glever.cs.uni-freiburg.de/wikidata/6yYhvA>)
- **171,324** author name strings
(<https://glever.cs.uni-freiburg.de/wikidata/YTjXZo>)



The LOTUS initiative's links to WikiCite



Scholarly articles main subjects (P921)

Q105223855

found in taxon	 Q105223855 Prunus cerasus edit 1 reference stated in Flavonoid 5-glucosides from Prunus cerasus bark and their characteristic weak glycosidic bonding + add reference
	 Q105223855 Prunus speciosa edit 1 reference stated in Flavonoids of Various Prunus Species. II. The Flavonoids in the Wood of Prunus speciosa + add reference
	 Q105223855 Daphne esquirolii edit 1 reference
	 Q105223855 Phaleria nisidai edit 1 reference stated in Genkwanin glycosides are major active compounds in Phaleria nisidai extract mediating improved glucose homeostasis by stimulating glucose uptake into adipose tissues + add reference



Q135917754

main subject	 Q135917754 Genkwanin 5-glucoside edit found in taxon Phaleria nisidai 1 reference inferred from reverse claim + add reference
	 Q135917754 Phaleria nisidai edit 1 reference based on heuristic inferred from title

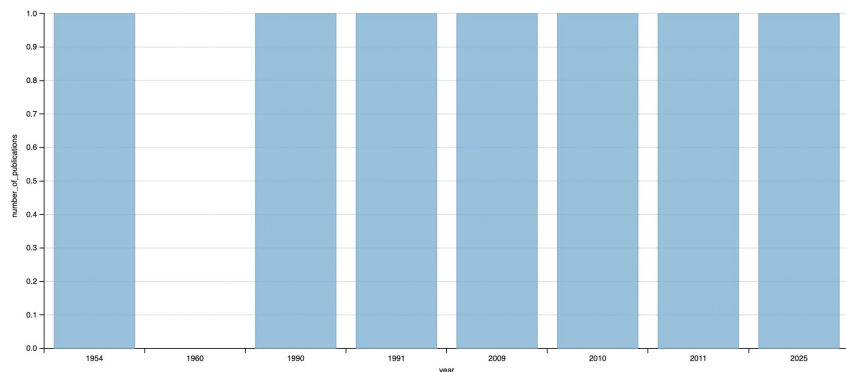
On Scholia



Q105223855

Publications per year

More details on literature about this chemical can found found on the [topic aspect page](#).



Taxa in which the chemical was found

Search:			
Taxon	↕	Source	↕ Doi
Wikstroemia canescens		Flavonoids from the aerial parts of Diplomorpha canescens.	10.1248/CPB.58.859
Prunus speciosa		Flavonoids of Various Prunus Species. II. The Flavonoids in the Wood of Prunus speciosa	10.1021/JA01650A087
Prunus cerasus		Flavonoid 5-glucosides from Prunus cerasus bark and their characteristic weak glycosidic bonding	10.1016/0031-9422(91)84200-C

Q135917754

Supports the following statement(s)

Statements in Wikidata supported by references to this work. Only a maximum of around 2000 statements are shown.

Search:

Item	↕ Property	↕ Value	↕ Unit
mangiferin	found in taxon	Phaleria nisdai	
isovitexin	found in taxon	Phaleria nisdai	
Yuankanin	found in taxon	Phaleria nisdai	
Iriflophenone3-C-β-glucoside	found in taxon	Phaleria nisdai	
Iriflophenone 2-O-rhamnoside	found in taxon	Phaleria nisdai	
Genkwain 5-glucoside	found in taxon	Phaleria nisdai	
6'-O-Acetylmangiferin	found in taxon	Phaleria nisdai	
2'-O-Acetylmangiferin	found in taxon	Phaleria nisdai	
2-C-β-Glucofuranosylmangiferin	found in taxon	Phaleria nisdai	
2-C-α-Glucofuranosylmangiferin	found in taxon	Phaleria nisdai	

WDQS legacy-full-graph

[work: statements.sparql](#)

Articles accessibility status (P6954 / P7228)



On 2025-08-22:

- **23,729 / 91,385 (26%)** references are **open access** (Q232932)
(<https://glever.cs.uni-freiburg.de/wikidata/HbtAzm>)
- **41,859 (46%)** references with associated **PubMed ID** (P698)
(<https://glever.cs.uni-freiburg.de/wikidata/FebmBD>)
- **4,528 (5%)** references with associated **PubMed Central ID** (P932)
(<https://glever.cs.uni-freiburg.de/wikidata/7mKXy3>)



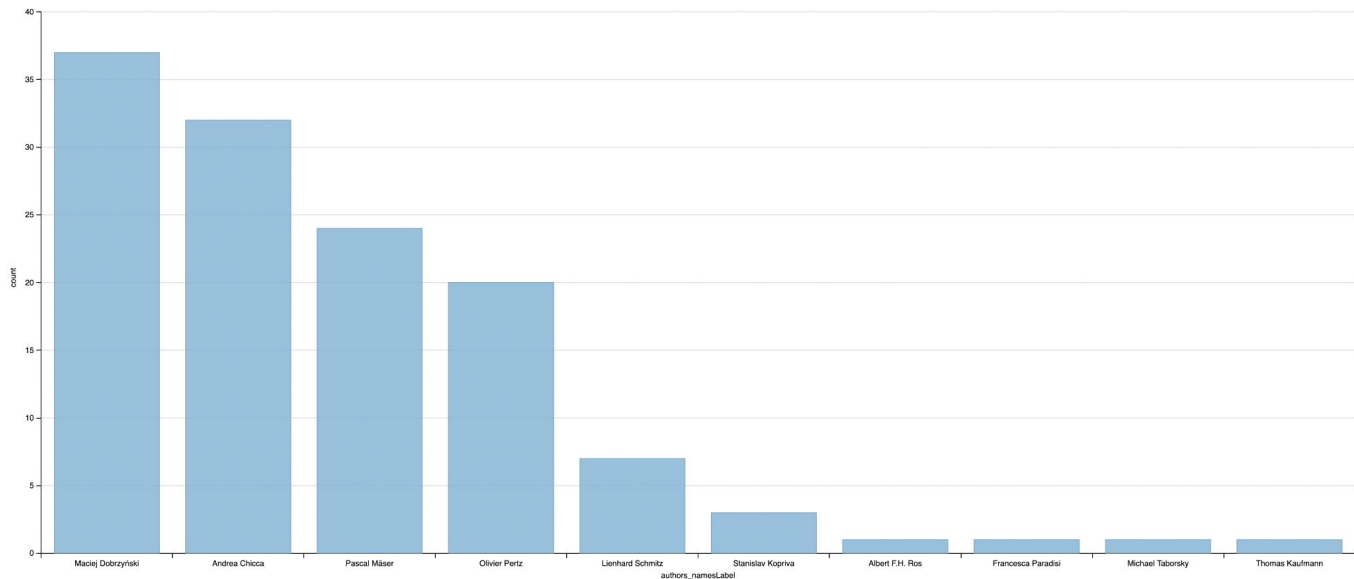
PubMed.gov



Example queries

Example queries

Authors affiliated to the University of Bern ([Q659080](#)) that reported natural products (<https://w.wiki/F3oX>)



Example queries

Authors that studied monoterpenoid indole alkaloids ([Q109323369](https://www.wikidata.org/wiki/Q109323369))
(<https://w.wiki/FB4d>)

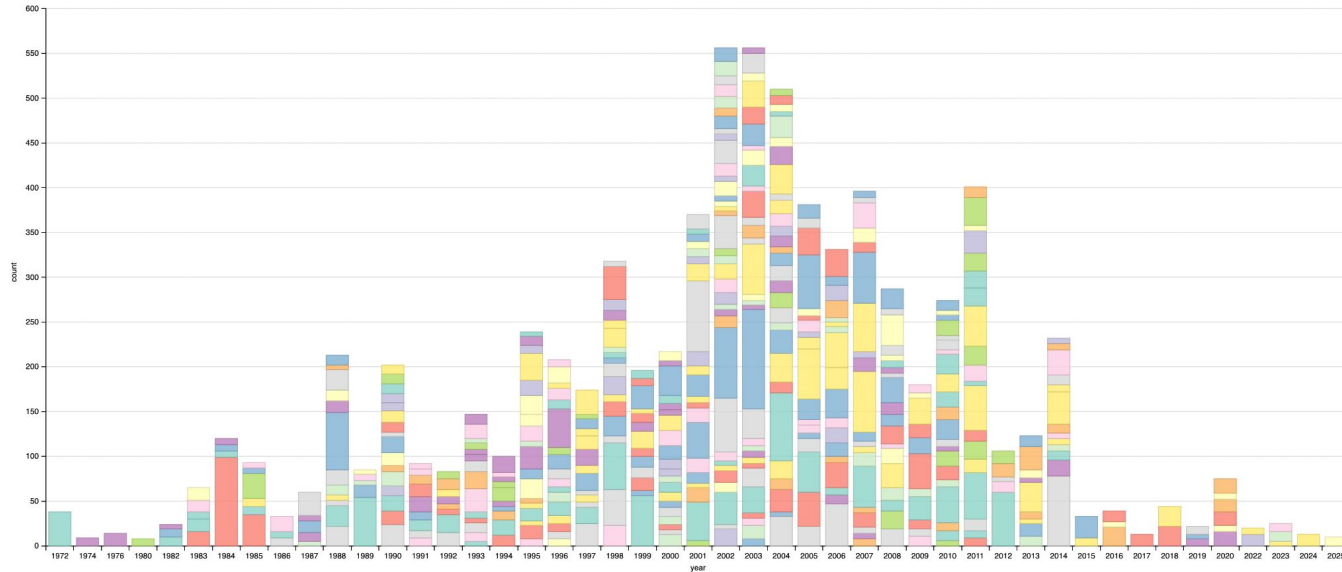
Authors that studied monoterpenoid indole alkaloids (Q109323369)



author	authorLabel	works	mias
Q88626236	Toh-Seok Kam	82	538
Q2040722	Rob Verpoorte	32	161
Q134269423	Georges Massiot	21	165
Q56744752	Michel Frédéric	20	96
Q43028096	Yun-Yee Low	17	117
Q19667267	Norman Farnsworth	17	53
Q123057466	Deborah V. L. Hirst	13	4

Example queries

Which biological families ([Q35409](#)) have been investigated by recipients of the Society of Medicinal Plants and Natural Product Research ([Q25894736](#)) awards? (<https://w.wiki/FB4s>)





Outlook and challenges

Challenges



The graph split

“The graph split feels like a failure because technical alternatives existed (e.g. [QLever](#)), it fractured communities like WikiCite that relied on integrated data, and ideologically it undermines Wikidata’s vision of being a unified, open knowledge graph—while raising barriers for newcomers and paving the way for more fragmentation.”

Rutz Adriano - WikiCite 2025, Bern

Outlook

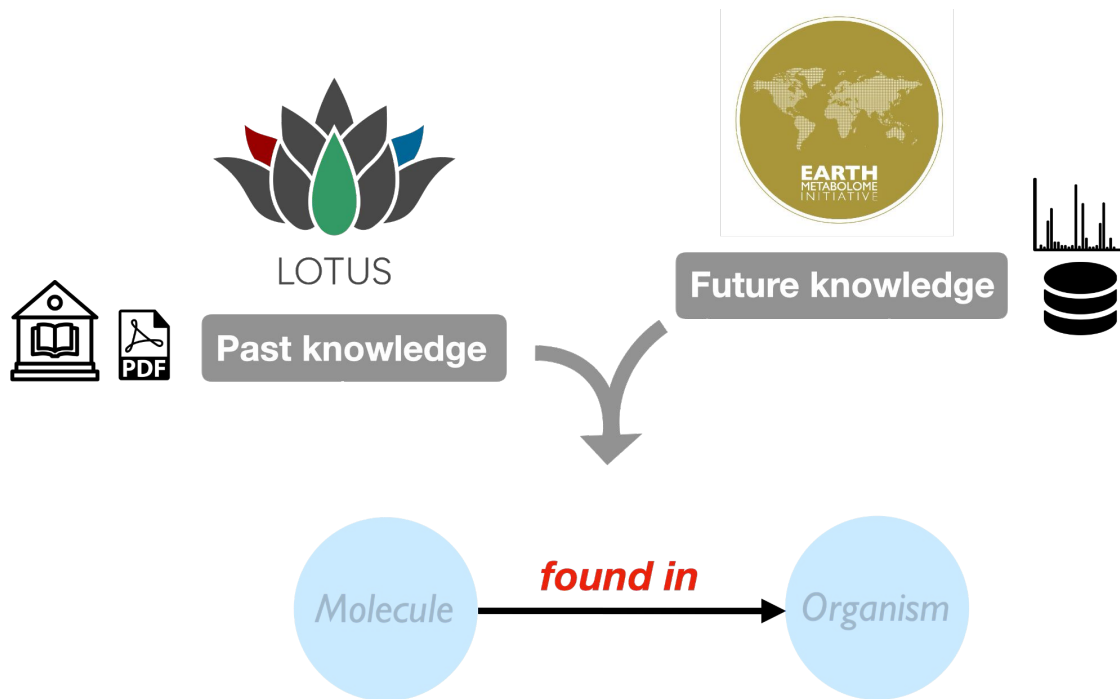


Image from

<https://doi.org/10.5281/zenodo.10654974>,

Allard et al. [CC BY 4.0](#)

Outlook

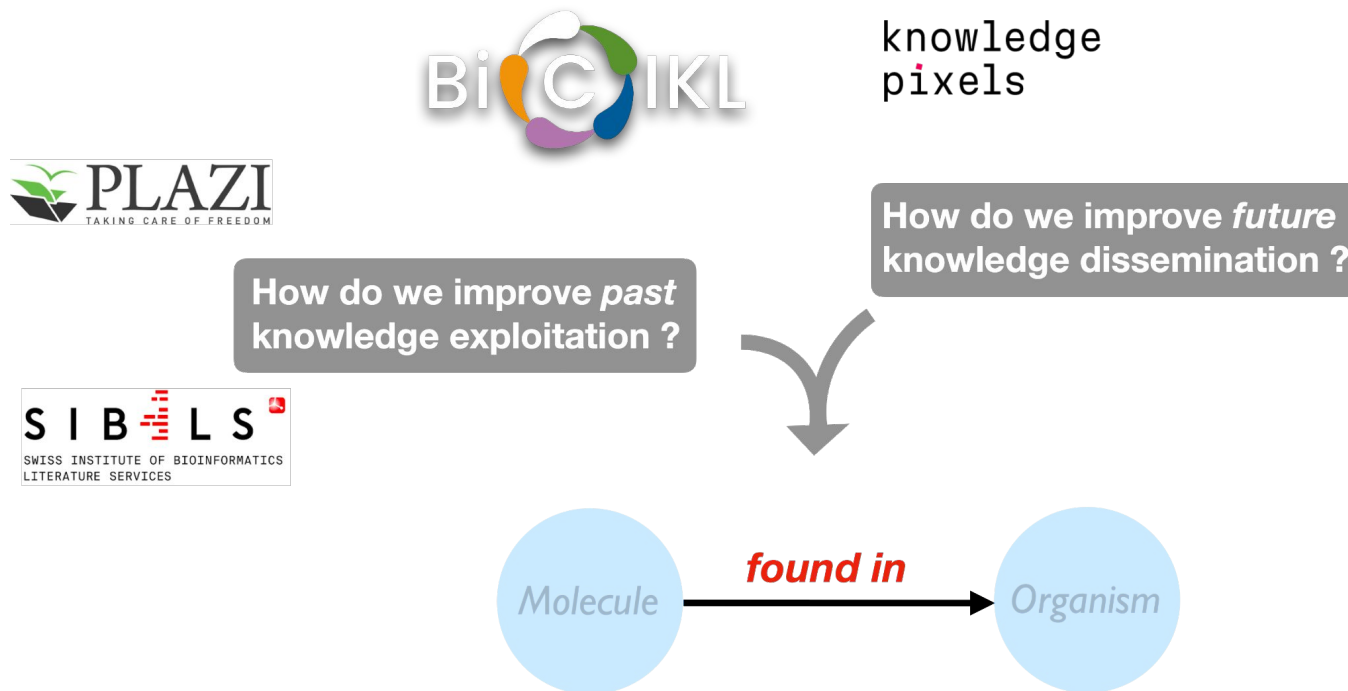


Image from

<https://doi.org/10.5281/zenodo.10654974>,

Allard et al. [CC BY 4.0](#)

Outlook - Better integration with Wikipedia

- English Wikipedia (en-WP):

[Add a `found in taxon` statement from Wikidata in the chemical infobox](#)

- French Wikipedia (fr-WP):

[Infobox Chimie#Ajout de "trouvé dans le taxon"](#)

`{{#invoke:Wikidata|frameFun|formatStatements|entity=Q121802|property=P703|showsource=true|numval=10}}`, donnant:

Avocatier, *Cyrtocarpa procera* ^(en)¹, *Iryanthera polyneura* ^(d)², *Morinda citrifolia* ^{3,4}, *Reissantia buchananii* ^(d)^{5,6}, *Embelia ribes* ^(en)^{7,8}, *Microtropis fokiensis* ^(fr)^{9,10}, Saxifrage stolonifère ¹¹, *Microtropis japonica* ^(d)^{12,13} et *Toxicodendron sylvestre* ^(d)¹⁴

Je ne connais pas tous les détails quant à l'approbation d'une telle proposition, désolé si quelque chose manque... [Accéder à la discussion](#)

Idee intéressante, mais dit comme ça je pense que ça risque de trop gonfler l'infobox — et le lecteur. L'idéal serait qu'il y trouve la propriété « trouvé dans le taxon », qu'il ajoute à l'infobox « Trouvé dans au moins X taxons » (X = le nombre de pages de la liste des taxons. Je ne sais pas si les modélistes sont capables de faire ça mais j'imagine que oui (@

[Répondre](#)

Référence

^(en) Jih-Jung Chen, Tsung-Hsien Chou, Chien-Fang Peng, Ih-Sheng Chen et Sheng-Zehn Yang, « Antitubercular dihydroagarofuranoid sesquiterpenes from the roots of *Microtropis fokiensis* », *Journal of Natural Products, ACS*, vol. 70, n° 2, 17 janvier 2007, p. 202-205 (ISSN 0163-3864 et 1520-6025, OCLC 04359563,

[Répondre](#)

nt Wikidata et, s'il avec en note de 0:39 (CEST)

Thanks for your attention!

Get in touch with us:

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All LOTUS initiants
<https://lotus.nprod.net/people>

[Wikidata:WikiProject_Chemistry_Natural_products#Humans](#)

Credits

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and, by extension, Wikidata contributors