



How to cite in Life sciences

Integrated Labo in Life Science II
BIO-204

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EPFL Library



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Learning objectives

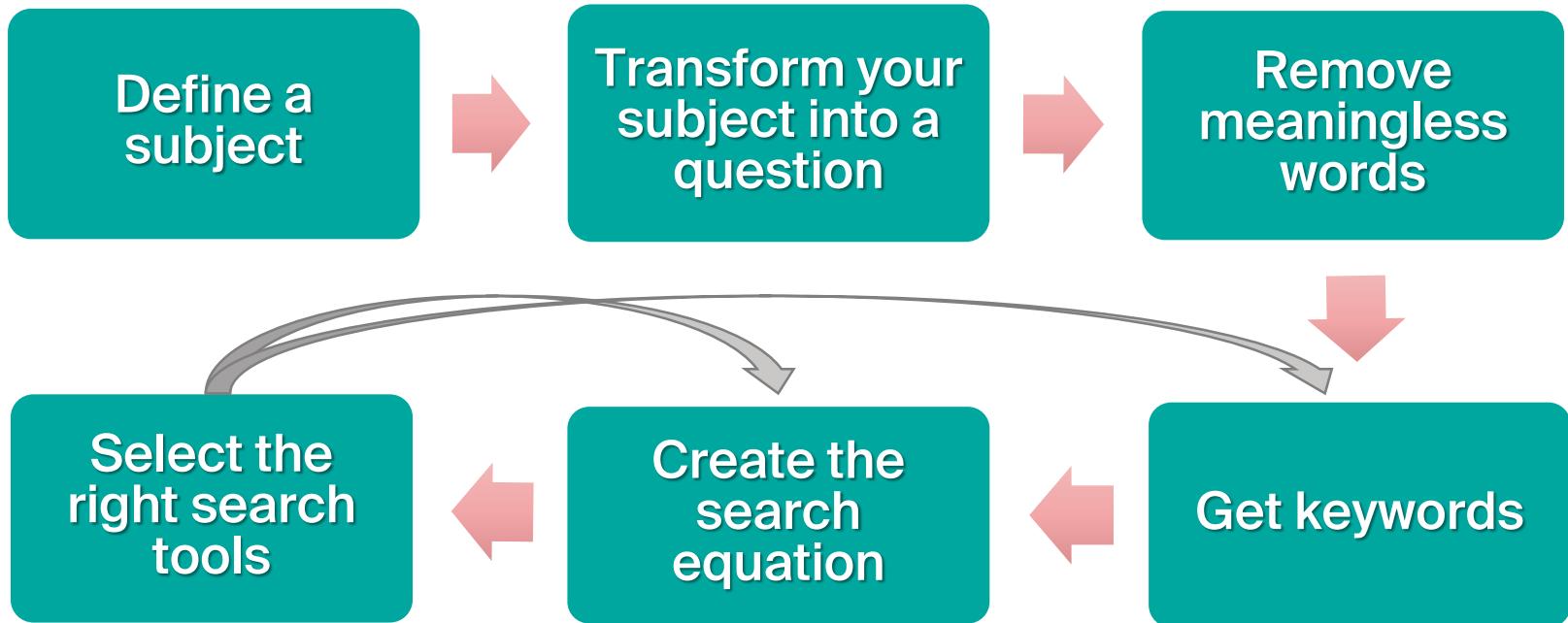
At the end of this training you will be able to:

- Use PubMed
- Define Plagiarism and Citation
- Use the reference manager software Zotero

- Acquisition of practical skills in experimentation and data analysis
- Acquisition of skills in information literacy
 - Search for scholarly publications
 - Keep track of your sources
 - Reuse/cite your sources
- Research is always based on pre-existing knowledge coming from other scientists

Information retrieval: Strategy and tools

Information retrieval strategy



The research grid

Define a subject and transform it into a question	Subject: CRISPR/Cas9 Question: How does CRISPR/Cas9 work in cancer therapy?		
Extract the main concepts and get keywords	CRISPR/Cas9	Cancer therapy	
Search for synonyms and related terms	Gene editing Gene correction	Cancer treatment	
Search 2 databases and compare their results	PubMed: 19 940		
Refine your search equation	Too many results? Use filters / Add concepts Too few results? Remove concept(s) / Add synonyms		

Where can I use my search equation?



<https://pubmed.ncbi.nlm.nih.gov/>

PubMed: What Is It?

- Biomedical and life sciences literature only
- Free U.S. National Library of Medicine database
- Search Builder and Search History
 - Build complex searches and keep track of your searches
- Human curated
- Free account with more features and possibilities
 - Use your EPFL email to create your account

What else is there?

- BEAST – EPFL's library catalogue (books, articles, patents, standards, etc.)
- Thematic preprints repositories (e.g. bioRxiv, medRxiv)
- Multi-disciplinary databases (e.g. Scopus, Web of Science)
- Discipline-specific databases (e.g. Biomedical & Life Sciences Collection)
- Open alternatives to Google Scholar (e.g. OpenAlex, Matilda)

Copyright, citations & plagiarism

Copyright...

- ...applies **automatically** (no need to ask/apply)
- ...according to the Swiss and European laws, it includes **moral rights** (authorship, integrity of the work), which are inalienable...
- ...and **property rights** (diffusion, commercial use), which are transferable
- ...protects **the form**, not the idea!
- ...provides, conditionally, some exceptions. In particular, those related to **education** and to **citation** (in Switzerland: [LDA art. 19 al. 1b](#) et [art. 25](#))

Citing enables you to...

- ...make clear what's **your own** (and **new**) contribution and what comes from previous publications
- ...add **credibility** to your work (you have read what was published in your domain and you know what you are talking about)
- ...place your work into its context and show the **originality** of your input
- ...provide the reader with further **references** that were useful to you in case they would like to know more.

Not citing means...

- Claiming as yours someone else's work
- Present as brand new something that it's not



Plagiarism

- Doesn't matter if it's intentional or not
- Doesn't matter if we're plagiarizing others or ourselves (self-plagiarism)
- Can have consequences! From blame to exclusion (see <https://www.fedlex.admin.ch/eli/cc/2021/482/fr>)

What is a citation?

C. tyrobutyricum is a spore-producing, rod-shaped, strictly anaerobic, gram-positive bacterium widely used in industrial production. It can use a wide range of available carbon sources, including glucose, xylose, glycerol, and mannose. These components can enter the cell through the **phosphotransferase system (PTS) with specific transport vectors** (Akhtar et al. 2018). *C. tyrobutyricum* produces the intermediate product pyruvate and a key precursor, butyryl CoA, via **a series of enzymatic reactions** (Jiang et al. 2010). With the catalysis of butyryl phosphate transferase and butyryl kinase, the precursor forms the main product (butyric acid), by-product (acetic acid), and a small amount of lactic acid. This process is accompanied by **the production of hydrogen and carbon dioxide** (Baroi et al. 2015).

References

Akhtar, T., A.S. Hashmi, M. Tayyab, A.A. Anjum, S. Saeed, and S. Ali. 2018. Bioconversion of agricultural waste to butyric acid through solid state fermentation by *Clostridium tyrobutyricum*. *Waste and Biomass Valorization* 11: 2067–2073.

[Article](#) [Google Scholar](#)

Baroi, G.N., I.V. Skiadas, P. Westermann, and H.N. Gavala. 2015. Effect of in situ acids removal on mixed glucose and xylose fermentation by *Clostridium tyrobutyricum*. *AMB Express* 5: 67.

[Article](#) [PubMed](#) [PubMed Central](#) [Google Scholar](#)

Bhatnagar, A., K.K. Kesari, and N. Shurpali. 2015. Multidisciplinary approaches to handling wastes in sugar industries. *Water, Air, & Soil Pollution*. <https://doi.org/10.1007/s11270-015-2705-y>.

[Article](#) [Google Scholar](#)

In-body citation

- Paraphrase
- It can also be an excerpt of the cited text, properly highlighted (quotation marks, italic, different indentation...)

Call

- Textual (e.g. Author, year) or numeric (e.g. [1], [2], etc-)

Bibliographic entry

- According to the citation style used

Paraphrasing

The original:

Human emissions of greenhouse gases are the primary driver of climate change today.

(from <https://ourworldindata.org/co2-and-greenhouse-gas-emissions>)

The paraphrase:

Greenhouse gas emissions, particularly carbon dioxide, are the primary cause of global climate change (Ritchie and Roser 2020)

(from <https://link.springer.com/article/10.1007/s10311-022-01468-z>)

How to insert a citation – Other options

The short excerpt

In his article *The biology of dying democracies*, Kováč (2019) states that «Marxist communism became a gigantic experiment in the 20th century to test the European rationalism. The experiment failed.»

The longer excerpt

The approach chosen for this article is the one presented by Kováč in *The biology of dying democracies* (2019), described as follows:

Humans are controversial beings, an inconsistent mixture of nature and culture and dominated by both. Biological hominization was followed by cultural humanization. So far, biologists mostly tended to conceive the biological individual as a Darwinian unit communicating with another individual in interest of one's own Darwinian fitness. Signals should serve to modify the behaviour of the receiver to benefit the signaler.

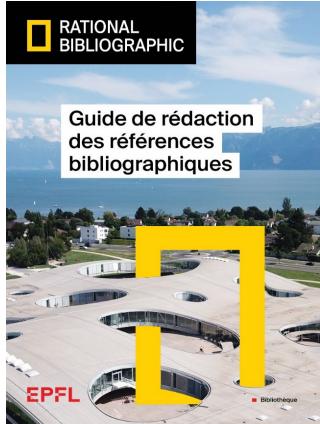
Multiple sources

Renewable green energy transitions are necessary to mitigate global climate change and reduce carbon emissions worldwide (Levenda et al. 2021; Chen et al. 2022).

OR

Experts believe that better information literacy knowledge will help students to judge the appropriateness of information[1-3].

Knowing more about citation and Information Literacy



Refer to our **Rational Bibliographic guide** to create and verify your references:
go.epfl.ch/guide-bibliographique

GAGNER DU TEMPS ET RÉALISER DE MEILLEURS TRAVAUX



Use **Infosphère** our **Information Literacy plateforme** to search, analyse, use and cite information in your works: go.epfl.ch/guide-bibliographique

Introduction to Zotero



Download and install: zotero.org

Documentation: go.epfl.ch/zot23

Contact us if you need help: go.epfl.ch/bookalibrarian

How does a Zotero library look like?

Demol

The screenshot shows a Zotero library interface with a sidebar and a main content area. The sidebar on the left contains a tree view of 'My Library' sections: Personal (Aigues-Mortes, Bibliometrics, Copyright, Databases, DRM, eBooks, Information Literacy, Publishing, Search equation, Zotero), Work (Bonsai, Drifting classroom, Earthquake engineering, EM, Indie rock, JDM, Nanocomposite catalysts, Nomikai + Konpa, Pseudo-parabolic, T-cell), and My Publications. At the bottom of the sidebar are buttons for Request, Read, Unavailable, Not needed, and a list of filters including -Chloronitrobenzene Hydrogenation, 02.30 Jr, 02.70 Wz, 05.45 Yv, 20th century, 34B27, 35M99, 60J75, 65L12, 65L20, 65T50, 94.05 Fr, 2017, academic ethics, academic evaluation, Academic librarians, Academic libraries, academic standards, academic writing, Access to Information, accueil, and Filter Tags.

The main content area displays a list of library items. A specific item, 'Contributions to the Theory of Riemann Surfaces. (AM-30), Volume 30' by Ahlfors, Lars Valerian, is selected and shown in a detailed view on the right. The detailed view includes fields for Item Type (Book), Title (Contributions to the Theory of Riemann Surfaces. (AM-30), Volume 30), Author (Ahlfors, Lars Valerian), Series (Annals of Mathematics Studies), Series Number (28), Volume (Volume 30), Edition (Princeton University Press on demand), Place (Princeton, NJ), Publisher (Princeton University Press), Date (1953), # of Pages (276), Language (eng), ISBN (978-1-4008-2837-1), Short Title, URL, Accessed, Archive, Loc. in Archive, Library Catalog (slsp-epfl.primo.exlibrisgroup.com), Call Number, Rights, Extra (Book Title: Contributions to the Theory of Riemann Surfaces. (AM-30), Volume 30), DOI (10.1515/9781400828371), Date Added (11/18/2021, 11:04:17 AM), Modified (11/18/2021, 11:04:17 AM), and Abstract.

- Create groups: <https://www.zotero.org/support/fr/groups>
- You must have an account to create a new group
- Take into account that the group owner stores the group files in her/his own Zotero account
- As a group, define rules (tree structure, file naming, adding tags and notes)
- Maintain high quality of metadata when collecting references (check that the main fields are filled in: title, author, date, publisher, etc.)
- Respect the work done by others

- Quiz Information Literacy and Scholarly communication (link on Moodle)

Questions and assessment



Please take the time to assess this training:

Scan the QR code or

<https://library-survey.epfl.ch/c/kk7bxcv7>

It will help us improve !



 **CONTACT**

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 library.epfl.ch
 [Book a librarian](#)