

AMERICAN PSYCHOLOGICAL ASSOCIATION

2019 CONVENTION

DR THOMAS SHAFEE

@WIKIJMED

@WIKIJSCI

@WIKIJHUM

WIKIPEDIA AS A KEY PUBLIC HEALTH TOOL

LEVERAGING THE WORLDS MOST-READ INFORMATION SOURCE

WHY EDIT WIKIPEDIA AND SISTER PROJECTS?

SELFLESS

- The noble cause of free information
- Giving back to a resource you've benefitted from
- Expert input on difficult topics
- Being part of the world's largest open-access project

SELFISH

- Public engagement and education
Massive exposure and reach
- Ensure your field is thoroughly and accurately represented
First google hit for most topics
(Students, Reviewers, Grant assessors, Journalists, Policymakers)
- Maximise use of the writing and images that you've already done
- Improve your non-specialist writing

OUTLINE

WHY SHOULD YOU BE INTERESTED IN EDITING WIKIPEDIA?



- A brief introduction to the largest encyclopaedia of all time
- Why it needs you and why you need it

HOW TO EDIT



- Text, images, references

HOW TO EDIT RIGHT!



- Best practice and common pitfalls

PART OF THE WIDER KNOWLEDGE ECOSYSTEM



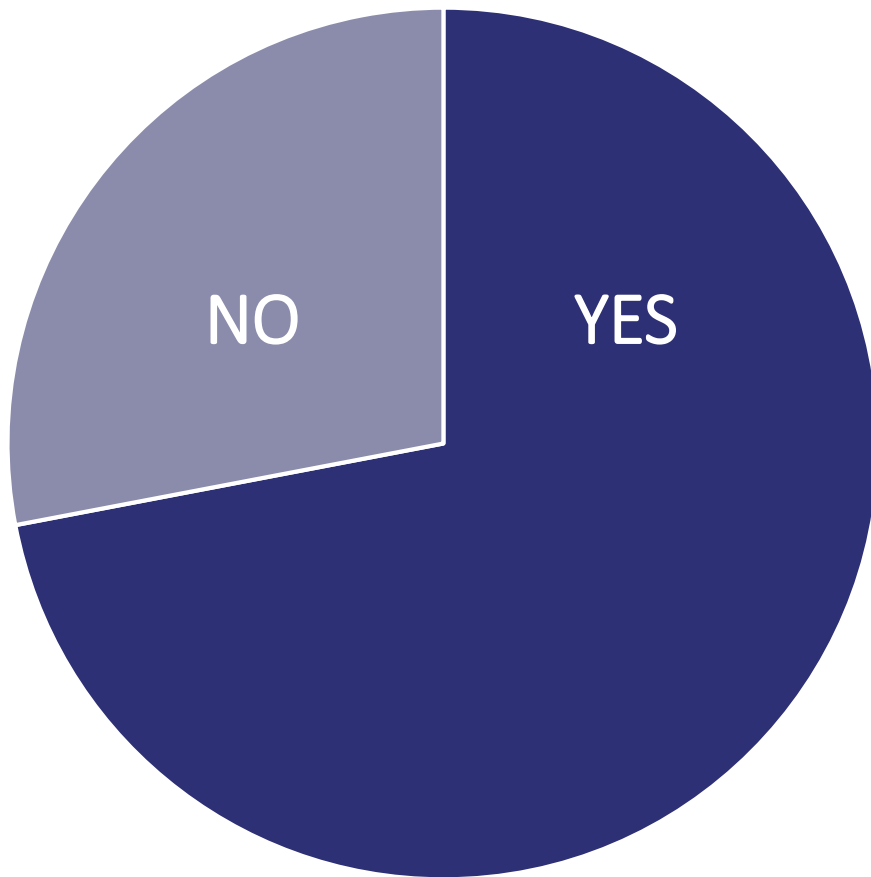
- Connected projects and collaborations

THE HIDDEN WORLD BEHIND WIKIPEDIA



- Help, community and resources

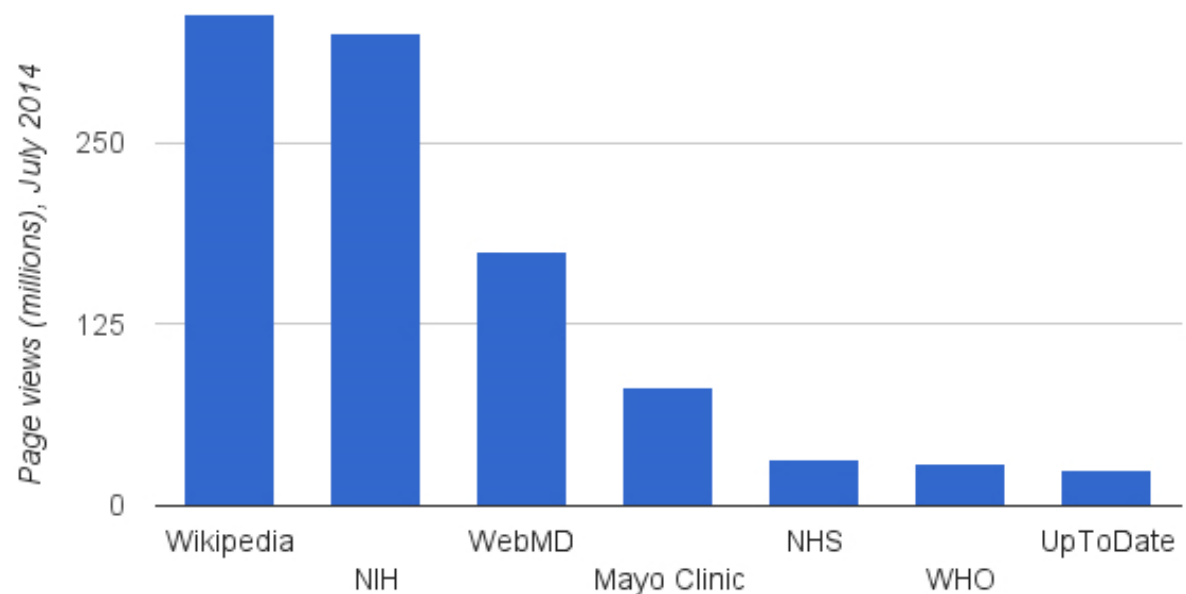
USE OF THE INTERNET FOR MEDICAL INFO



- **72%** of internet users report having looked online for health information within the past year
- **53%** state that it influenced their decision
- **35%** did not follow up their searches by visiting a clinician

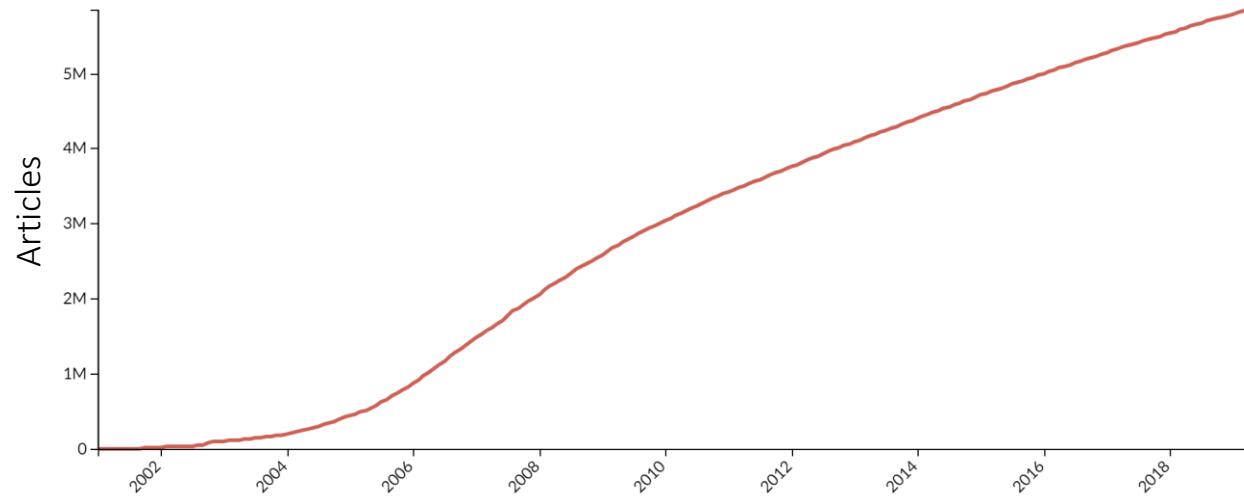
COMPETING SOURCES OF MEDICAL INFORMATION

- Of the many competing sources, most are non-commercial
- Wikipedia's med content dominates most search engine results



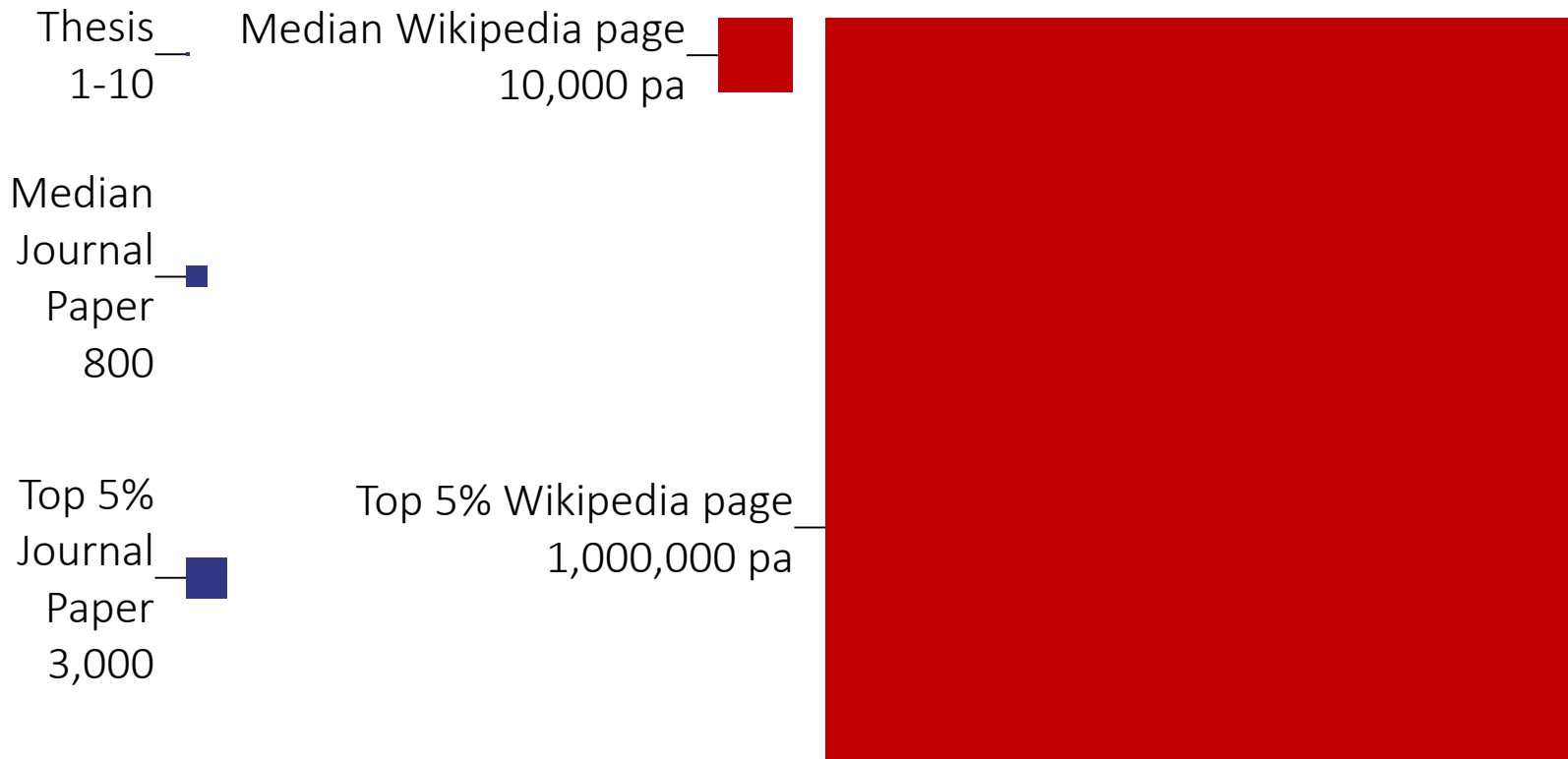
A BRIEF HISTORY

- 2001 began
- 2007 editing peak
 - But poor accuracy
 - Stricter standards lead to fall-off in editors
- 2015 plateau
 - Concerted recruitment
 - Easier editing tools
 - First year since 2007 with editor growth
- In 295 languages
- 5th busiest website

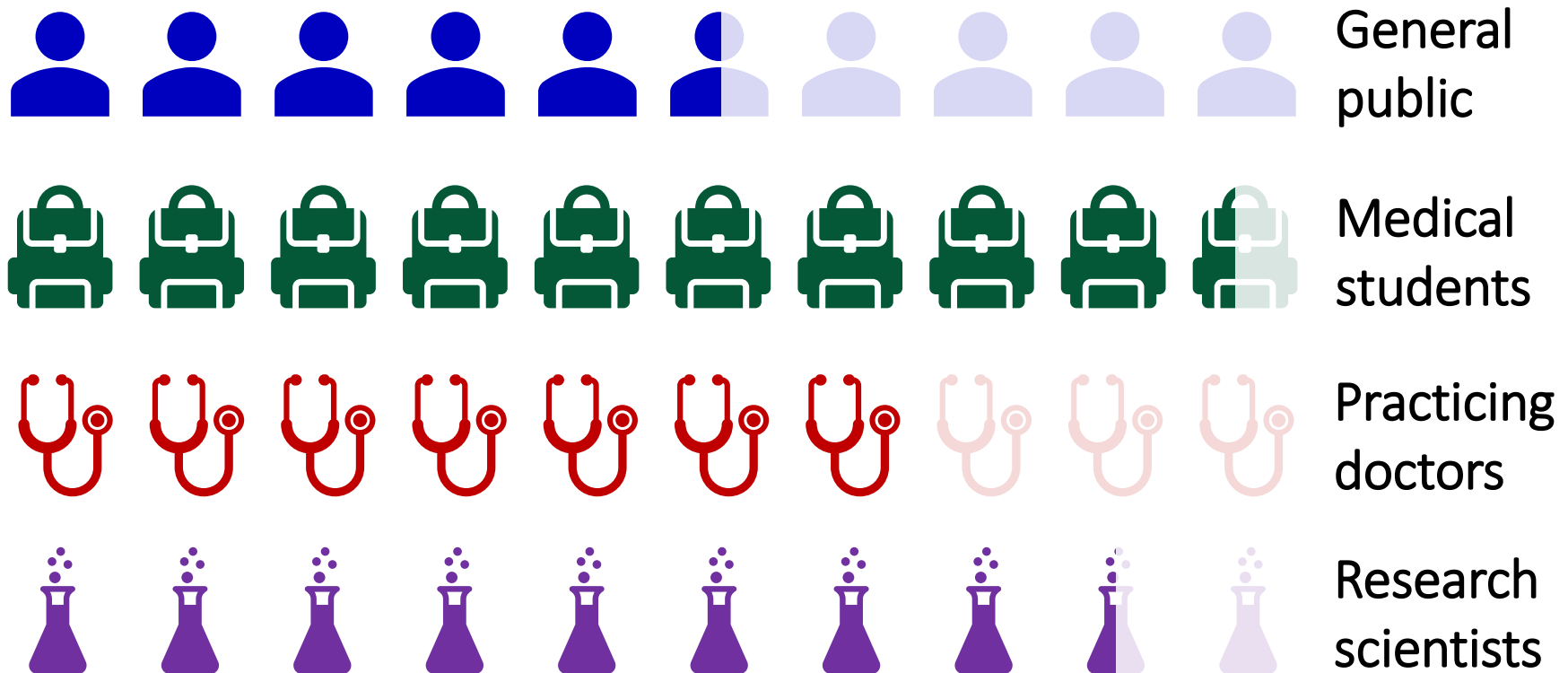


* 25-100 edits per month

WHO READS WIKIPEDIA?



WHO READS WIKIPEDIA'S MEDICAL CONTENT?



+ Patients, journalists, lawmakers, etc.

PUTTING THAT IN PERSPECTIVE

- Suicide prevention
- Suicide among LGBT youth
- Postpartum depression
- Psychology of torture
- Dehumanization
- Family therapy
- Epidemiology of depression
- Digital media use and mental health
- Lithium (drug)
- Short-term memory

100,000 – 1,000,000
reads per year

ARTICLE QUALITY: INTERNAL REVIEW



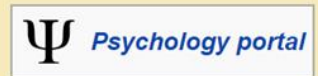
- Articles are rated
 - Importance
 - Quality
- Top two quality ratings
 - Promoted by review
- Status
 - Displayed on talk page
 - Status can also be revoked by review

		Importance			
		Top	High	Mid	Low
Quality	FA	1	6	5	7
	GA	2	11	20	41
	B	17	125	200	98
	C	15	161	523	415
	Start	9	174	697	1,433
	Stub		4	96	687

Pseudo
peer-reviewed



This article is within the scope of **WikiProject Psychology**, a collaborative effort to improve the coverage of **Psychology** on Wikipedia. If you would like to participate, please visit the project page, where you can join the discussion and see a list of open tasks.



- Stub** This article has been rated as **Stub-Class** on the project's [quality scale](#).
- High** This article has been rated as **High-importance** on the project's [importance scale](#).

ARTICLE QUALITY: INTERNAL REVIEW

- Significant issues are tagged with warnings
- Articles can have a variety of additional tags added



This article **needs attention from an expert in Psychology**. The specific problem is: **High Importance articles deserve attention and care from WP:PSYCH and others knowledgeable on this topic**. See the [talk page](#) for details. [WikiProject Psychology](#) may be able to help recruit an expert. *(May 2017)*



This article **does not cite any sources**. Please help [improve this article](#) by [adding citations to reliable sources](#). Unsourced material may be challenged and [removed](#). *(August 2019)* ([Learn how and when to remove this template message](#))

This article has multiple issues. Please help [improve it](#) or [\[Collapse\]](#) discuss these issues on the [talk page](#). ([Learn how and when to remove these template messages](#))



- This article's **tone or style may not reflect the encyclopedic tone used on Wikipedia**. *(November 2014)*
- This article **is written like a personal reflection, personal essay, or argumentative essay** that states a Wikipedia editor's personal feelings or presents an original argument about a topic. *(November 2014)*
- This article **may be too technical for most readers to understand**. Please [help improve it](#) to [make it understandable to non-experts](#), without removing the technical details. *(November 2014)*
- This article may need to be **rewritten** to comply with Wikipedia's [quality standards](#). *(November 2014)*
- This article's **lead section does not adequately summarize key points of its contents**. *(December 2014)*

ARTICLE QUALITY: EXTERNAL REVIEW

- Quality comparable to *Encyclopædia Britannica* even back in 2005
- Accuracy varies by topic, but broad trends:
 - Inconsistent coverage
 - Missing / out of date information
 - Missing illustration
 - Difficult readability
- Accuracy has immediate, real-world impact
 - Internet medical data influences the healthcare decisions of >50% of readers
 - Many articles are read a million times per year
- Yet it has been consistently difficult to engage academics, experts and health professionals

WHO WRITES WIKIPEDIA?

- Admins & Bureaucrats (600 active)

 - Peer exam and interview

 - Can mark pages as protected and block editors

 - Some niche privileges (e.g. delete pages, allow editing bots)

- Editors (30,000 active)

 - Access to Visual Editor

 - Persistent reputation

 - Able to edit protected pages

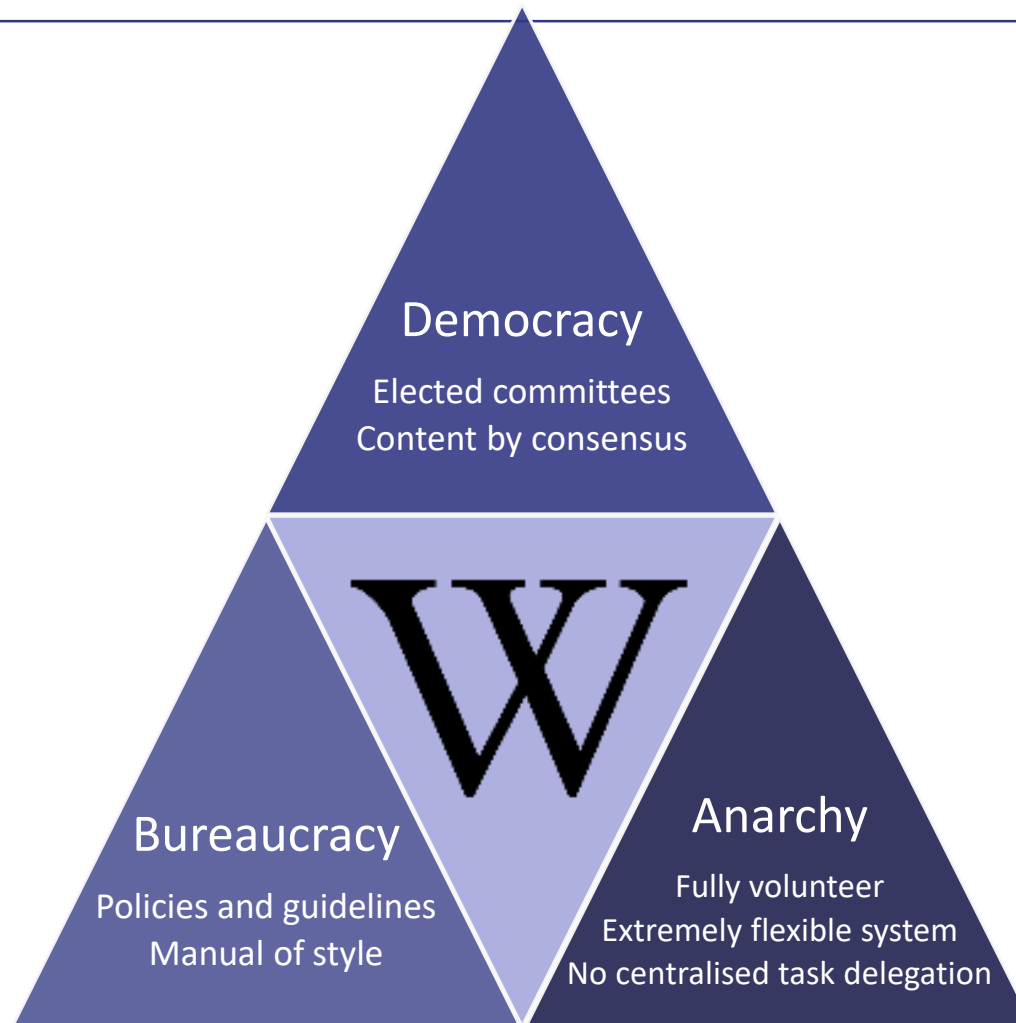
- Anonymous users ($\frac{1}{3}$ of all edits)

 - Text recognition test to prove human

 - Edits are marked with ip address

 - Can edit >99% of pages

HOW IS WIKIPEDIA RULED?



OUTLINE

WHY SHOULD YOU BE INTERESTED IN EDITING WIKIPEDIA?



- A brief introduction to the largest encyclopaedia of all time
- Why it needs you and why you need it

HOW TO EDIT



- Text, images, references

HOW TO EDIT RIGHT!



- Best practice and common pitfalls

PART OF THE WIDER KNOWLEDGE ECOSYSTEM



- Connected projects and collaborations

THE HIDDEN WORLD BEHIND WIKIPEDIA



- Help, community and resources

SIGNING UP



WIKIPEDIA
The Free Encyclopedia

- Main page
- Contents
- Featured content
- Current events
- Random article
- Donate to Wikipedia
- Wikipedia store

- Interaction
 - Help
 - About Wikipedia
 - Community portal
 - Recent changes
 - Contact page

- Tools
 - Upload file
 - Special pages
 - Printable version

Languages



[Create account](#) [Log in](#)

Special page

Search

Create account

Username [\(help me choose\)](#)

Pseudonym

Orthonym

Password

Confirm password

Email address (optional)

Security check

ghanababer

[Refresh](#)

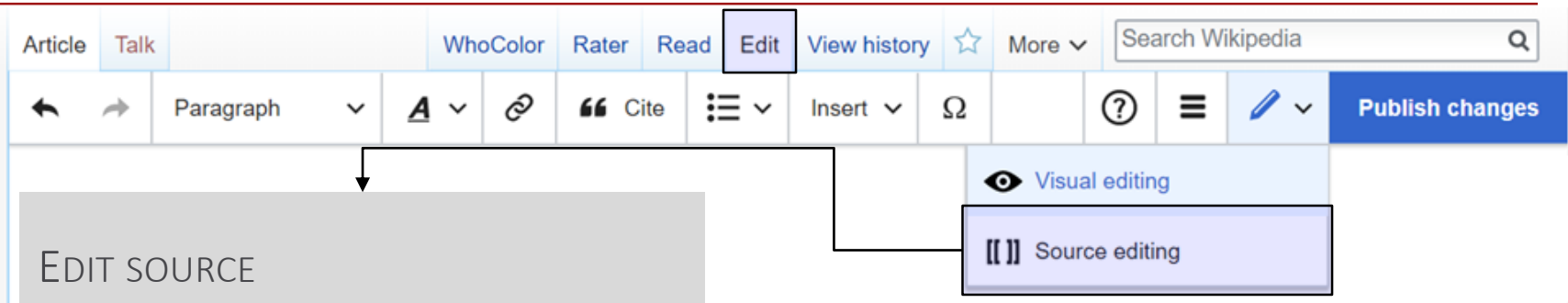
Can't see the image? [Request an account](#)

[Create your account](#)

TO TRY EDITING A BLANK TEST PAGE, SIGN UP AND CLICK "SANDBOX"



THE TWO WAYS TO EDIT



- Scripting language ('Markup')
Versatile with experience

- References are tricky

- Very few things you actually need to know

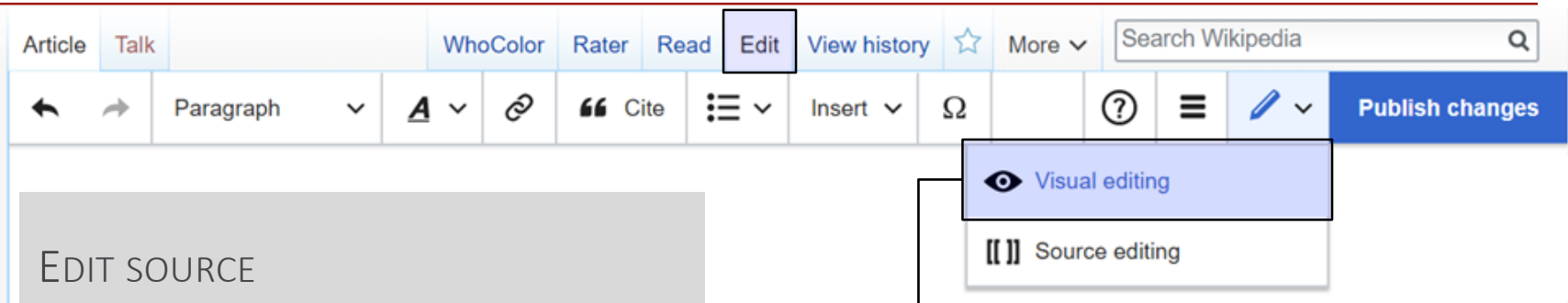
- [[link]] → [link](#)
- [[link | other words]] → [other words](#)
- ''italic'' → *italic*
- '''bold''' → **bold**
- *bullet → • bullet
- ==Heading== → Heading
- ===Subheading=== → Subheading

== Biological function ==

Enzymes serve a wide variety of [[function (biology)|functions]] inside living organisms. They are indispensable for [[signal transduction]] and cell regulation, often via [[kinase]]s and [[phosphatase]]s.<ref>{{cite journal | vauthors = Hunter T | title = Protein kinases and phosphatases: the yin and yang of protein phosphorylation and signaling | journal = Cell | volume = 80 | issue = 2 | pages = 225-36 | date = January 1995 | pmid = 7834742 | doi = 10.1016/0092-8674(95)90405-0 }}</ref> They also generate movement, with [[myosin]] hydrolyzing ATP to generate [[muscle contraction]] and also moving cargo around the cell as part of the [[cytoskeleton]].<ref>{{cite journal | vauthors = Berg JS, Powell BC, Cheney RE | title = A millennial myosin census | journal = Molecular Biology of the Cell | volume = 12 | issue = 4 | pages = 780-94 | date = April 2001 | pmid = 11294886 | pmc = 32266 | doi = 10.1091/mbc.12.4.780 }}</ref> Other ATPases in the cell membrane are [[ion pump (biology)|ion pumps]] involved in [[active transport]]. Enzymes are also involved in more exotic functions, such as [[luciferase]] generating light in [[firefly|fireflies]].<ref>{{cite journal | vauthors = Meighen EA | title = Molecular biology of bacterial bioluminescence | journal = Microbiological Reviews | volume = 55 | issue = 1 | pages = 123-42 | date = March 1991 | pmid = 2030669 | pmc = 372803 }}</ref>



THE TWO WAYS TO EDIT



- Scripting language ('Markup')
Versatile with experience
- Very few things you actually need to know

<code>[[link]]</code>	→ link
<code>[[link other words]]</code>	→ other words
<code>''italic''</code>	→ <i>italic</i>
<code>'''bold'''</code>	→ bold
<code>*bullet</code>	→ • bullet
<code>==Heading==</code>	→ Heading
<code>===Subheading===</code>	→ Subheading

EDIT (VISUAL EDITOR)

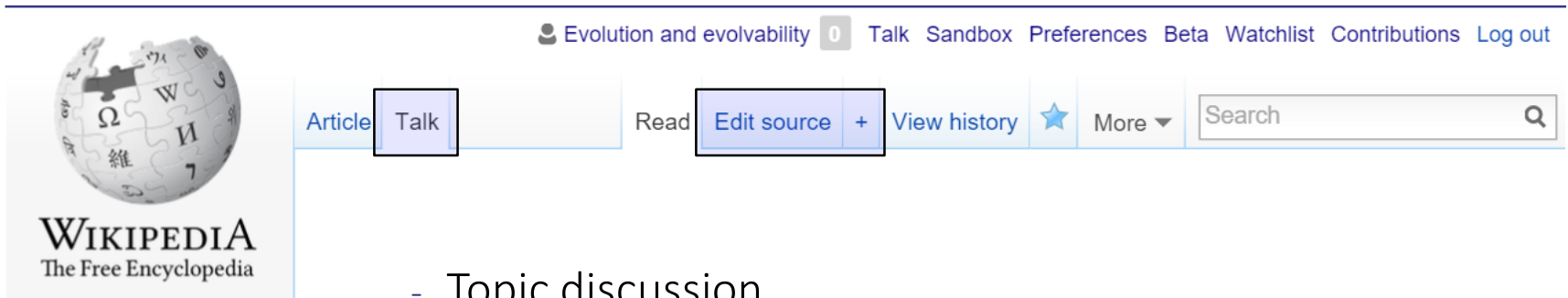
- Edit like word processing software
More intuitive

EXAMPLE

- Write some text -
- Add a reference -
- Summarise and save -



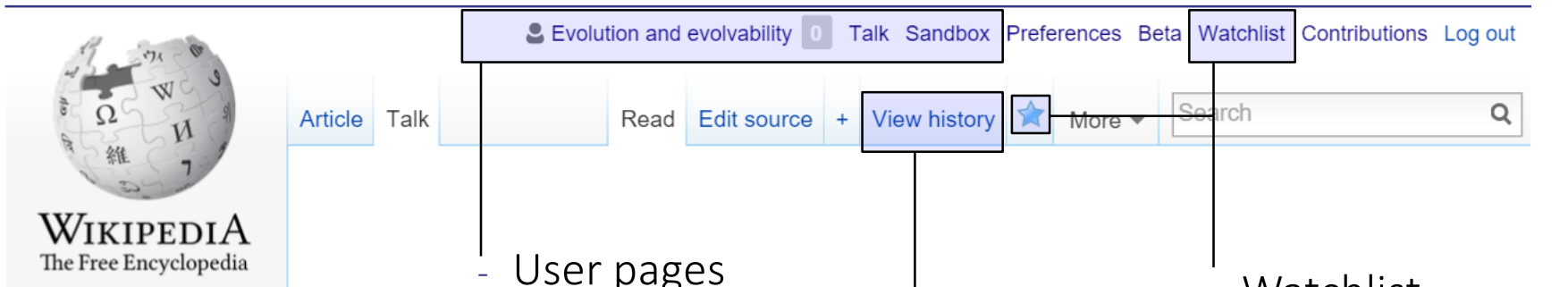
TALK PAGES



- Topic discussion
 - Uncertain edits
 - Controversial edits
 - Suggested improvements
- Header banners
 - Page rating
 - Wikiproject
- Currently can't use VisualEditor
 - Need to use mark up text
 - ~~~~ → Signature



USEFUL PERIPHERAL FEATURES



The screenshot shows the Wikipedia user interface for the user 'Evolution and evolvability'. The top navigation bar includes links for 'Evolution and evolvability', 'Talk', 'Sandbox', 'Preferences', 'Beta', 'Watchlist', 'Contributions', and 'Log out'. Below this, the article title 'Evolution and evolvability' is shown with tabs for 'Article' and 'Talk'. The main navigation bar contains 'Read', 'Edit source', '+', 'View history', a star icon, and a 'More' dropdown menu. A search bar is located on the right side of the page.

- **User pages**
 - Pseudonym / orthonym
 - Editing aims
 - Brief biography
 - Points of pride
- **User talk pages**
 - Discussion
 - Notifications
- **User sandbox**
 - Personal testing area
 - Try things out without accidentally breaking articles
- **History**
 - Permanent record of all versions of a page
 - Summary descriptions and sizes of edits
- **Watchlist**
 - Any changes to your favourite pages
 - Wikipedia-wide announcements

CREATING A NEW ARTICLE



Wikipedia:Articles for creation

From Wikipedia, the free encyclopedia



Welcome to Articles for Creation!

Shortcut:
WP:AFC

Welcome to Articles for Creation! If you don't have a [Wikipedia user account](#), consider [registering an account now](#) so that you can [create encyclopedia articles yourself](#). If you choose not to register, or you have a [conflict of interest](#), but have an idea for a [new article](#) and some [references](#), you can create one [here](#) and it will be reviewed and considered for publication. If you have an idea for the title of an article, but no content for the article itself, please make a request at [Wikipedia:Requested articles](#). If you already have a Wikipedia user account, you can also use the [Article Wizard](#) to help you create your article. To nominate an existing draft or user sandbox for review at Articles for Creation, add the code `{{subst:submit}}` to the top of the draft or sandbox page.

Note that if you are being paid to contribute to Wikipedia, under the [Terms of Use](#) and [WP:Paid](#), you must disclose your employer, client and affiliations. If you have another type of conflict of interest, you should disclose the conflict of interest, per [WP:COI](#).

Bona fide reviewers at Articles for Creation will **never** contact or solicit anyone for payment to get a draft into article space, improve a draft, or restore a deleted article. If someone contacts you with such an offer, please post on [Wikipedia:WikiProject Articles for creation/Help desk](#).

[Click here to create an article now!](#)

[https://en.wikipedia.org/wiki/Wikipedia:Articles for creation](https://en.wikipedia.org/wiki/Wikipedia:Articles_for_creation)
[WP:AFC](#)



COPYRIGHT



- Be careful not to violate copyright when adding to Wikipedia
 - Plagiarism detectors monitor all edits (TurnItIn)
- All text is under the Creative Commons licence
 - Share** copy and redistribute the material in any medium or format
 - Adapt** remix, transform, and build upon the material for any purpose (even commercial)
 - Attribute** credit must be given (link to the license, and indicate any changes)
 - Share alike** if you do reuse this information, it must be distributed under the same license
- Images are also Creative Commons by default
 - Optionally** Remove share alike requirement
 - Remove all requirements (full public domain)

OUTLINE

WHY SHOULD YOU BE INTERESTED IN EDITING WIKIPEDIA?



- A brief introduction to the largest encyclopaedia of all time
- Why it needs you and why you need it

HOW TO EDIT



- Text, images, references

HOW TO EDIT RIGHT!



- Best practice and common pitfalls

PART OF THE WIDER KNOWLEDGE ECOSYSTEM



- Connected projects and collaborations

THE HIDDEN WORLD BEHIND WIKIPEDIA



- Help, community and resources



SIMILARITIES TO ACADEMIC WRITING

- Neutral point of view [\[\[WP:NPOV\]\]](#)
 - Balanced information
- Cite reliable, verifiable sources [\[\[WP:RS\]\]](#) [\[\[WP:VER\]\]](#)
- Avoid plagiarism [\[\[WP:PLAG\]\]](#)
 - Several detection bots search for instances
 - Don't accidentally copyvio yourself!
- Short lead abstract [\[\[WP:LEAD\]\]](#)
- Permanent record
- Open-access mentality [\[\[WP:FIVEPILLARS\]\]](#)
- Post-publication peer review (of a sort)
 - Continuous editing and improvement by other authors
 - Organised peer review for 'Good Article' or 'Featured Article' status [\[\[WP:GA\]\]](#) , [\[\[WP:FA\]\]](#)



A BRIEF SIDENOTE ON SHORTCUTS [[[WP:CUTS](#)]]

- WP:XYZ links shortcut to various ‘behind the scenes’ pages
 - Policies
 - Tools
 - Community pages
 - Wikiprojects

“ [WP:AFD](#) - [WP:OR](#), [WP:N](#), [WP:V](#) ”

“ Nominated [article for deletion](#) due to [original research](#) and [lack of notability](#); in addition, it does not appear to be possible to [verify the accuracy of the sources](#), as the article contains only references that are contained in unpublished manuscripts. ”



DIFFERENCES TO ACADEMIC WRITING

- Content & format
- Referencing & quality
- Peers & collaboration



DIFFERENCES (CONTENT & FORMAT)

- General audience! [\[\[WP:TECHNICAL\]\]](#)
 - Everything should be understandable to a undergraduate
 - The first paragraph should be understandable to a secondary school pupil
- Wikilink to key relevant topics [\[\[WP:LINK\]\]](#)
- Writing style [\[\[WP:MOS\]\]](#)
 - No referencing images, they should stand alone
 - Minimise name-dropping
 - Date-relevant statements become out of date quickly
 - Avoid review-style colloquialisms

“ In this article we focus on examples from proteases... ”

“ See figure 5 ”

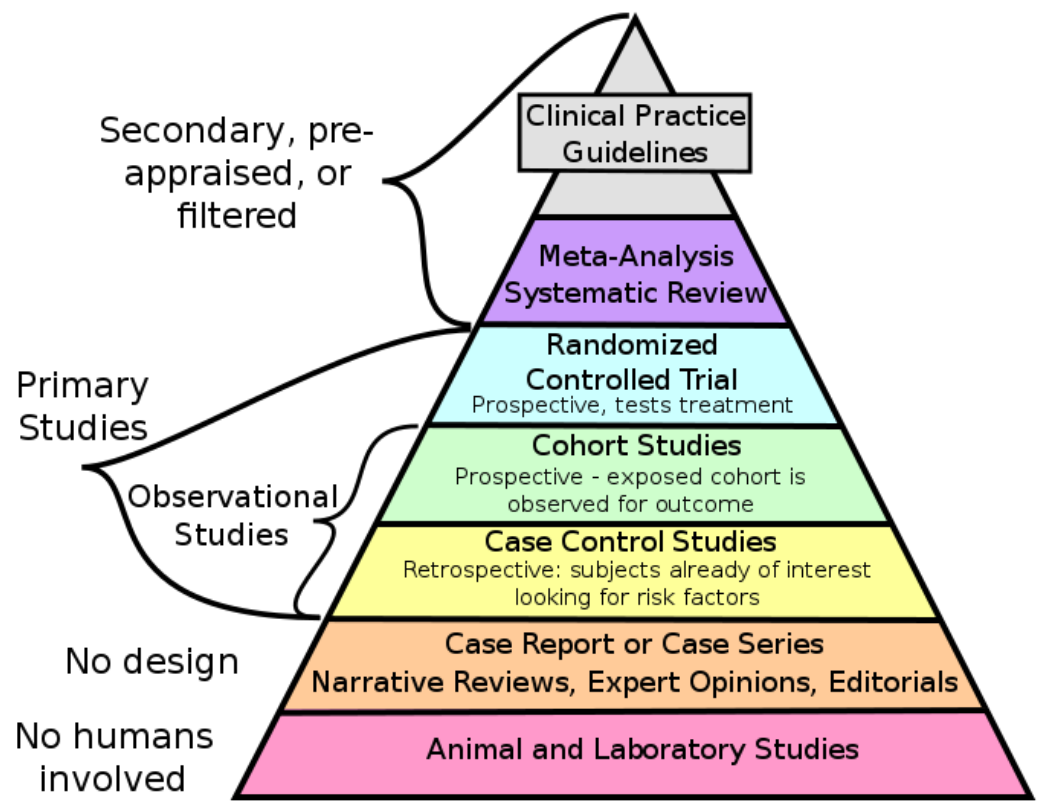
“ Jones *et.al.* have demonstrated that... ”

“ Currently / the newest / recent... ”



DIFFERENCES (REFERENCES & QUALITY)

- Secondary sources are preferred
[[WP:SCIRS]] [[WP:MEDRS]]
Especially for medical statements
Compromise: cite both secondary and primary research
- No original research [[WP:NOR]]
Including synthesis of information
Can only summarise published work
- Constant post-publication review and update [[WP:WIP]]





DIFFERENCES (PEERS & COLLABORATION)

- No ownership [\[\[WP:OWN\]\]](#)
 - There's no official lead or corresponding author
- Everyone's equal [\[\[WP:FIVEPILLARS\]\]](#) , [\[\[WP:BE BOLD\]\]](#)
 - You may sometimes need to explain your edits to people with less knowledge than you
 - Editors don't have to be experts on the topic or on Wikipedia editing
 - The average edit is more helpful than harmful
- Notability [\[\[WP:NOTE\]\]](#)
 - Academic biographies must be particularly so [\[\[WP:PROF\]\]](#)
- Disagreements [\[\[WP:DISPUTE\]\]](#)
 - Article's talk page
 - Dispute resolution mediation request [\[\[WP:DRR\]\]](#)

OUTLINE

WHY SHOULD YOU BE INTERESTED IN EDITING WIKIPEDIA?



- A brief introduction to the largest encyclopaedia of all time
- Why it needs you and why you need it

HOW TO EDIT



- Text, images, references

HOW TO EDIT RIGHT!



- Best practice and common pitfalls

PART OF THE WIDER KNOWLEDGE ECOSYSTEM



- Connected projects and collaborations

THE HIDDEN WORLD BEHIND WIKIPEDIA



- Help, community and resources



WIKIPEDIA
The Free Encyclopedia



Wiktionary
The free dictionary



WIKIBOOKS



WIKISOURCE



WIKINEWS



WIKIVERSITY



WIKISPECIES
free species directory



MediaWiki



WIKIDATA



**WIKIMEDIA
COMMONS**



WIKIMEDIA
META-WIKI



WIKIMEDIA
INCUBATOR

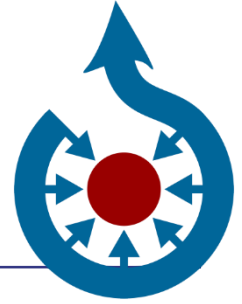


WIKIMEDIA
CLOUD SERVICES



WIKIMEDIA
FOUNDATION

A MASSIVE MEDIA REPOSITORY



- Multimedia file repository
 - Images
 - Video
 - Sound
- Public domain / Freely-licensed
 - Creative commons licenses
- Content scope
 - Educational
 - Informative
 - Instructional
- Like all Wikimedia projects, free and volunteer-run



THE FUTURE OF DATA

- Free, open, structured knowledge base
- Humans and machine readable and editable
 - Multilingual, queryable
- Standardised, centralised, highly interlinked
 - Statements, sources, and connections to other databases

Item	Property	Value
Q42	P69	Q691283
Douglas Adams	educated at	St John's College



- Open courses, targeted to any education level
- Formatted as teaching resources
- Flexible organisation structure
- Example: “What We Wish They Knew: 13 Reasons Why”
 - Organised epis-de-by-episode and theme-by-theme
 - Information directory
- Example: “Dealing With a School Shooting”
 - Written for caregivers, professionals and members of the public
 - 4-week process, questions, resources

BRIDGING THE ACADEMIC DIVIDE

- Content published into both Wikipedia and academic corpus



Stable, citable, peer-reviewed version with the credibility of a scholarly journal



Living version with extreme impact of Wikipedia

- Example journals



PLOS Genetics
PLOS CompBiol



Wiki.J. Med

Wiki.J. Sci

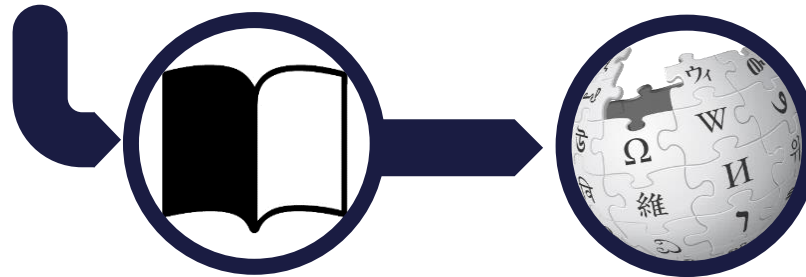
Wiki.J. Hum

GENE

Gene

RNAbiology

RNA Biology



JOURNAL FIRST



WIKIPEDIA FIRST



PARALLEL

ACADEMIC AND WIKIPEDIC VERSIONS

OPEN ACCESS Freely available online

PLOS COMPUTATIONAL BIOLOGY

Topic Page

Circular Permutation in Proteins

Spencer Bliven^{1*}, Andreas Prlić^{2*}

1 Bioinformatics Program, University of California, San Diego, La Jolla, California, United States of America, **2** San Diego Supercomputer Center, University of California San Diego, La Jolla, California, United States of America

This is a "Topic Page" article for *PLoS Computational Biology*.

Circular permutation describes a type of relationship between proteins, whereby the proteins have a changed order of amino acids in their protein sequence, such that the sequence of the first portion of one protein (adjacent to the N-terminus) is related to that of the second portion of the other protein (near its C-terminus), and vice versa (see Figure 1). This is directly analogous to the mathematical notion of a cyclic permutation over the set of residues in a protein.

Circular permutation can be the result of evolutionary events, post-translational modifications, or artificially engineered mutations. The result is a protein structure with different connectivity, but overall similar three-dimensional (3D) shape. The homology between portions of the proteins can be established by observing similar sequences between N- and C-terminal portions of the two

permutated variants of cyclic wild-type proteins [10]. SISYPHUS is a database that contains a collection of hand-curated manual alignments of proteins with non-trivial relationships, several of which have circular permutations [11].

Evolution

There are two main models that are currently being used to explain the evolution of circularly permuted proteins: *permutation by duplication and fission and fusion*. The two models have compelling examples supporting them, but the relative contribution of each model in evolution is still under debate [12]. Other, less common, mechanisms have been proposed, such as "cut and paste" [13] or "exon shuffling."

Permutation by Duplication



WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction
Help
About Wikipedia
Community portal
Recent changes
Contact page

Tools
What links here
Related changes
Upload file
Special pages
Permanent link

Article Talk

Evolution and evolvability Talk Sandbox Preferences Beta Watchlist Contributions Log out

Read Edit source Edit View history More Search

Circular permutation in proteins

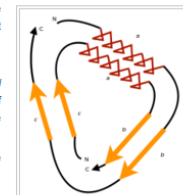
From Wikipedia, the free encyclopedia
(Redirected from Circular permutant)

A **circular permutation** is a relationship between proteins whereby the proteins have a changed order of amino acids in their peptide sequence. The result is a protein structure with different connectivity, but overall similar three-dimensional (3D) shape. In 1979, the first pair of circularly permuted proteins – **concanavalin A** and **lectin** – were discovered; over 2000 such proteins are now known.

Circular permutation can occur as the result of evolutionary events, posttranslational modifications, or artificially engineered mutations. The two main models proposed to explain the evolution of circularly permuted proteins are *permutation by duplication and fission and fusion*. Permutation by duplication occurs when a gene undergoes duplication to form a tandem repeat, before redundant sections of the protein are removed; this relationship is found between saposin and swaposin. Fission and fusion occurs when partial proteins fuse to form a single polypeptide, such as in nicotinamide nucleotide transhydrogenases.

Circular permutations are routinely engineered in the laboratory to improve their catalytic activity or thermostability, or to investigate properties of the original protein.

Traditional algorithms for sequence alignment and structure alignment are not able to detect circular permutations between proteins. New non-linear approaches have been developed that overcome this and are able to detect topology-independent similarities.



Schematic representation of a circular permutation in two proteins. The first protein (outer circle) has the sequence a-b-c. After the permutation the second protein (inner circle) has the sequence c-a-b. The letters N and C indicate the location of the amino- and carboxy-termini of the protein sequences and how their positions change relative to each other.

Contents [hide]

- 1 History
- 2 Evolution
 - 2.1 Permutation by duplication
 - 2.1.1 Saposin and swaposin
 - 2.2 Fission and fusion
 - 2.2.1 Transhydrogenases
 - 2.3 Other processes that can lead to circular permutations
 - 2.3.1 Post-translational modification
- 3 The role of circular permutations in protein engineering
- 4 Algorithmic detection of circular permutations
- 5 References
- 6 Further reading

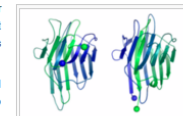
History [edit source | edit]

In 1979, Bruce Cunningham and his colleagues discovered the first instance of a circularly permuted protein in nature.^[1] After determining the peptide sequence of the lectin protein favin, they noticed its similarity to a known protein – concanavalin A – except that the ends were circularly permuted. Later work confirmed the circular permutation between the pair^[2] and showed that concanavalin A is permuted post-translationally^[3] through cleavage and an unusual protein ligation.^[4]

After the discovery of a natural circularly permuted protein, researchers looked for a way to emulate this process. In 1983, David Goldenberg and Thomas Creighton were able to create a circularly permuted version of a protein by chemically ligating the termini to create a cyclic protein, then introducing new termini elsewhere using trypsin.^[5] In 1989, Karin Luger and her colleagues introduced a genetic method for making circular permutations by carefully fragmenting and ligating DNA.^[6] This method allowed for permutations to be introduced at arbitrary sites.^[6]

Despite the early discovery of post-translational circular permutations and the suggestion of a possible genetic mechanism for evolving circular permuteds, it was not until 1995 that the first circularly permuted pair of genes were discovered. Saposins are a class of proteins involved in sphingolipid catabolism and antigen presentation of lipids in humans. Chris Ponting and Robert Russell identified a circularly permuted version of a saposin inserted into plant aspartic proteinase, which they nicknamed swaposin.^[7] Saposin and swaposin were the first known case of two natural genes related by a circular permutation.^[7]

Hundreds of examples of protein pairs related by a circular permutation were subsequently discovered in nature or produced in the laboratory. As of February 2012, the Circular Permutation Database^[8] contains 2,238 circularly permuted protein pairs with known structures, and many more are known without structures.^[8] The CyBase database collects proteins that are cyclic, some of which are permuted variants of cyclic wild-type proteins.^[11] SISYPHUS is a database that contains a collection of hand-curated manual alignments



Two proteins that are related by a circular permutation. Concanavalin A (left), from the Protein Data Bank (PDB: 3cna), and peanut lectin (right), from PDB: 2pel, which is homologous to favin. The termini of the proteins are highlighted by blue and green spheres, and the sequence of residues is indicated by the gradient from blue (N-terminus) to green (C-terminus). The 3D fold of the two proteins is highly similar, however, the N- and C-termini are located on different positions of the protein.^[11]

References [edit source]

The 2012 version of this article has passed academic peer review (here), has been published in **PLOS Computational Biology** and can be cited as:



Bliven S, Prlić A (2012). "Circular permutation in proteins". *PLOS Computational Biology*. **8** (3): e1002445. doi:10.1371/journal.pcbi.1002445. PMC 3320104. PMID 22496628.

- ^a ^b ^c Cunningham BA, Hemperly JJ, Hopp TP, Edelman GM (July 1979). "Favin versus concanavalin A: Circularly permuted amino acid sequences". *Proceedings of the National Academy of Sciences of the United States of America*. **76** (7): 3218–22. doi:10.1073/pnas.76.7.3218. PMC 383795. PMID 16592676.
- ^a Einspahr H, Parks EH, Suguna K, Subramanian E, Suddath FL (December 1986). "The crystal structure of pea lectin at 3.0-Å resolution". *The Journal of Biological Chemistry*. **261** (35): 16518–27. PMID 3782132.

INTERNATIONAL PROJECTS

- WikiEdu

 - Wikipedia editing as part of assessed student coursework

 - Used in psychology courses at dozens of US universities

 - e.g. UCLA, Uni North Carolina, Uni Michigan, FIU

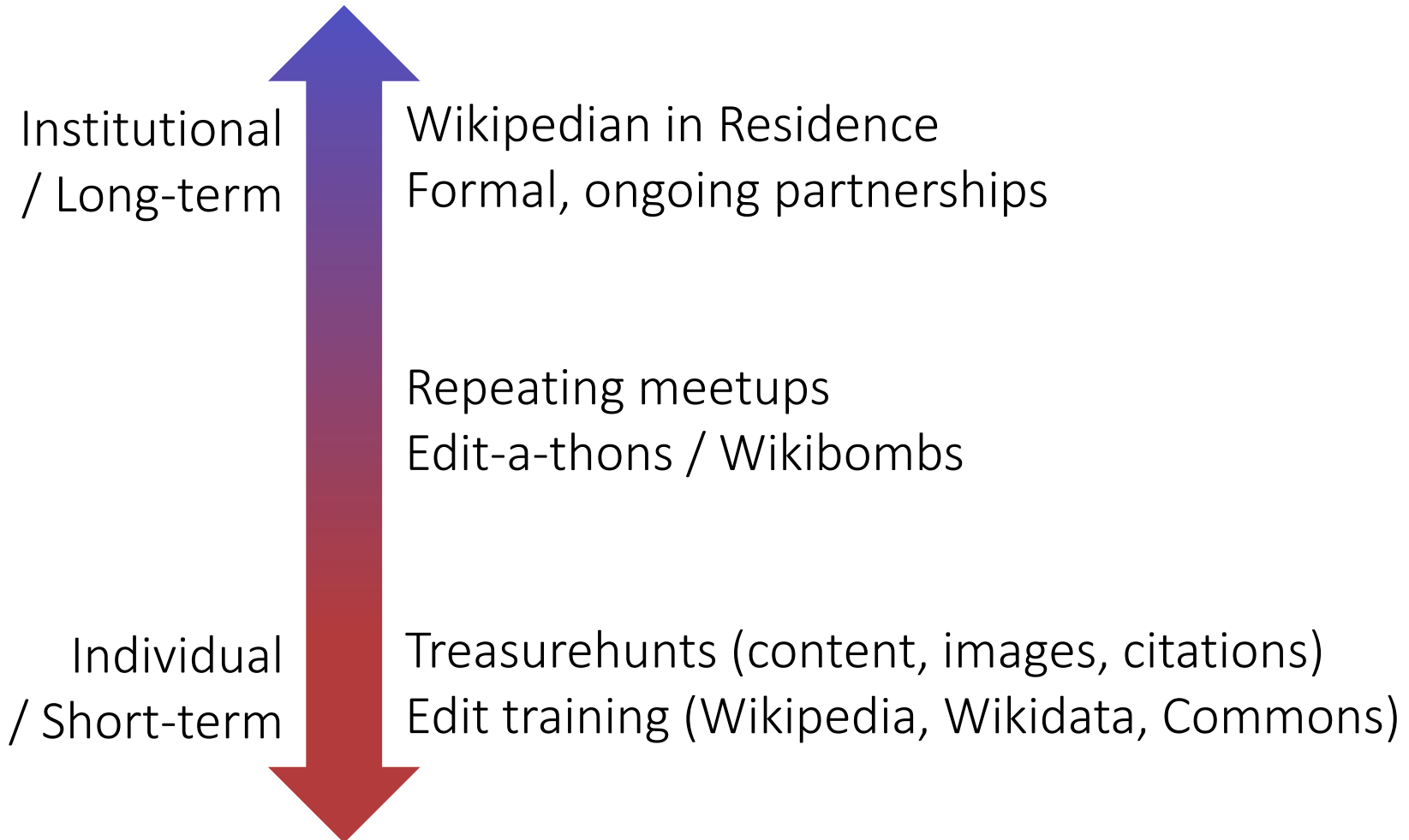
- WikiJournals

 - Academic journals that dual-publish 1) stable version of record, 2) into Wikipedia

- ORCID integration

- WikiCite

PROJECT AND COLLABORATION FORMATS



OUTLINE

WHY SHOULD YOU BE INTERESTED IN EDITING WIKIPEDIA?



- A brief introduction to the largest encyclopaedia of all time
- Why it needs you and why you need it

HOW TO EDIT



- Text, images, references

HOW TO EDIT RIGHT!



- Best practice and common pitfalls

PART OF THE WIDER KNOWLEDGE ECOSYSTEM



- Connected projects and collaborations

THE HIDDEN WORLD BEHIND WIKIPEDIA



- Help, community and resources



WIKIPEDIA
The Free Encyclopedia

[Main page](#)
[Contents](#)
[Featured content](#)
[Current events](#)
[Random article](#)
[Donate to Wikipedia](#)
[Wikipedia store](#)

Interaction

[Help](#)
[About Wikipedia](#)
[Community portal](#)
[Recent changes](#)
[Contact page](#)

Tools

[What links here](#)
[Related changes](#)
[Upload file](#)
[Special pages](#)
[Permanent link](#)
[Page information](#)
[Wikidata item](#)

Print/export

[Create a book](#)
[Download as PDF](#)
[Printable version](#)



COMMUNITY

- General community portal [\[\[WP:COM\]\]](#)
Help, suggestions, news
- Regional Wikimedia Chapters meta.wikimedia.org/wiki/Affiliates
- Wikiprojects [\[\[WP:WPDIR\]\]](#)
 - Psychology
 - Medicine
 - Sociology
 - Neurobiology
 - Women's Health
 - LGBT studies
 - Death

WIKIPROJECT PSYCHOLOGY [[WP:PSY]]



About this WikiProject

[edit](#) | [watch](#)

This is a community dedicated to improving Wikipedia's coverage of [psychology](#), psychological theories, psychological research and [psychotherapy](#). Its broad goals are:

1. To assess [psychology-related articles](#) and [tag them appropriately](#) when there are problems.
2. To remove [vandalism](#), [original research](#) and [spam](#).
3. To ensure that articles are based on [independent reliable secondary sources](#).
4. To represent scientific controversies and scientific consensus fairly, writing articles in [a neutral style](#).
5. To improve and review articles to [Good Article](#) and [Featured Article](#) quality.
6. To create a friendly and supportive atmosphere for editors who want to contribute.
7. To [inform the community](#) about issues that need discussion.

Participants are encouraged to [be bold](#) in enforcing [Wikipedia's policies](#) across the relevant articles.

As part of Wikipedia's [Year of Science](#), participants are encouraged to take part in the [PSYCH+Feminism](#) initiative to improve the number and quality of psychology articles about prominent women in psychology.

About the subject area

[edit](#) | [watch](#)

Psychology is an [academic](#) and [applied](#) discipline that involves the [scientific study](#) of human and nonhuman animal [mental functions](#) and [behaviors](#). In this field, a professional practitioner or researcher is called a [psychologist](#). Psychologists are classified as [social](#) or [behavioral scientists](#). Psychologists attempt to understand the role of [mental functions](#) in individual and [social behavior](#), while also exploring underlying [physiological](#) and [neurological](#) processes.

Basic research in psychology includes [perception](#), [cognition](#), [attention](#), [emotion](#), [motivation](#), [brain functioning](#), [personality](#), [behavior](#), and [interpersonal relationships](#). Some, especially [depth psychologists](#), also consider the [unconscious mind](#). Psychologists employ [empirical methods](#) to determine [causal](#) and [correlational](#) relationships between psychosocial [variables](#). In [addition](#), or in [opposition](#), to employing [empirical](#) and [deductive](#) methods, [clinical psychologists](#) sometimes rely upon [symbolic interpretation](#) and other [inductive](#) techniques.

[More on Psychology...](#)



WIKIPEDIA
The Free Encyclopedia

Main page
Contents
Featured content
Current events
Random article
Donate to Wikipedia
Wikipedia store

Interaction

Help

About Wikipedia
Community portal
Recent changes
Contact page

Tools

What links here
Related changes
Upload file
Special pages
Permanent link
Page information
Wikidata item

Print/export

Create a book
Download as PDF
Printable version



FURTHER HELP

- Interactive help (scarily fast response times)

Teahouse for new editors [[WP:TH]]

Helpdesk for experienced editors [[WP:HD]]

- Tutorials

General tutorial [[Help:Intro]]

- Academic-specific advice

Ten simple rules for editing Wikipedia - Logan et. al. (2010) *Plos Comp. Bio.*

- This presentation is freely available online

[https://en.wikipedia.org/wiki/File:Wikipedia Workshop.pdf](https://en.wikipedia.org/wiki/File:Wikipedia_Workshop.pdf)

Just search "<File:Wikipedia Workshop.pdf>"

Contact

Email	Thomas.Shafee@gmail.com
Google Scholar	Thomas Shafee
ResearchGate	Thomas Shafee
LinkedIn	Thomas Shafee

Journals

WikiJournal of Medicine (WikiJMed.org)
WikiJournal of Science (WikiJSci.org)
PLOS (TopicPagesWiki.plos.org)

Wikipedia

My userpage Search “User:tshafee”
WikiProject Medicine Search “WP:MED”

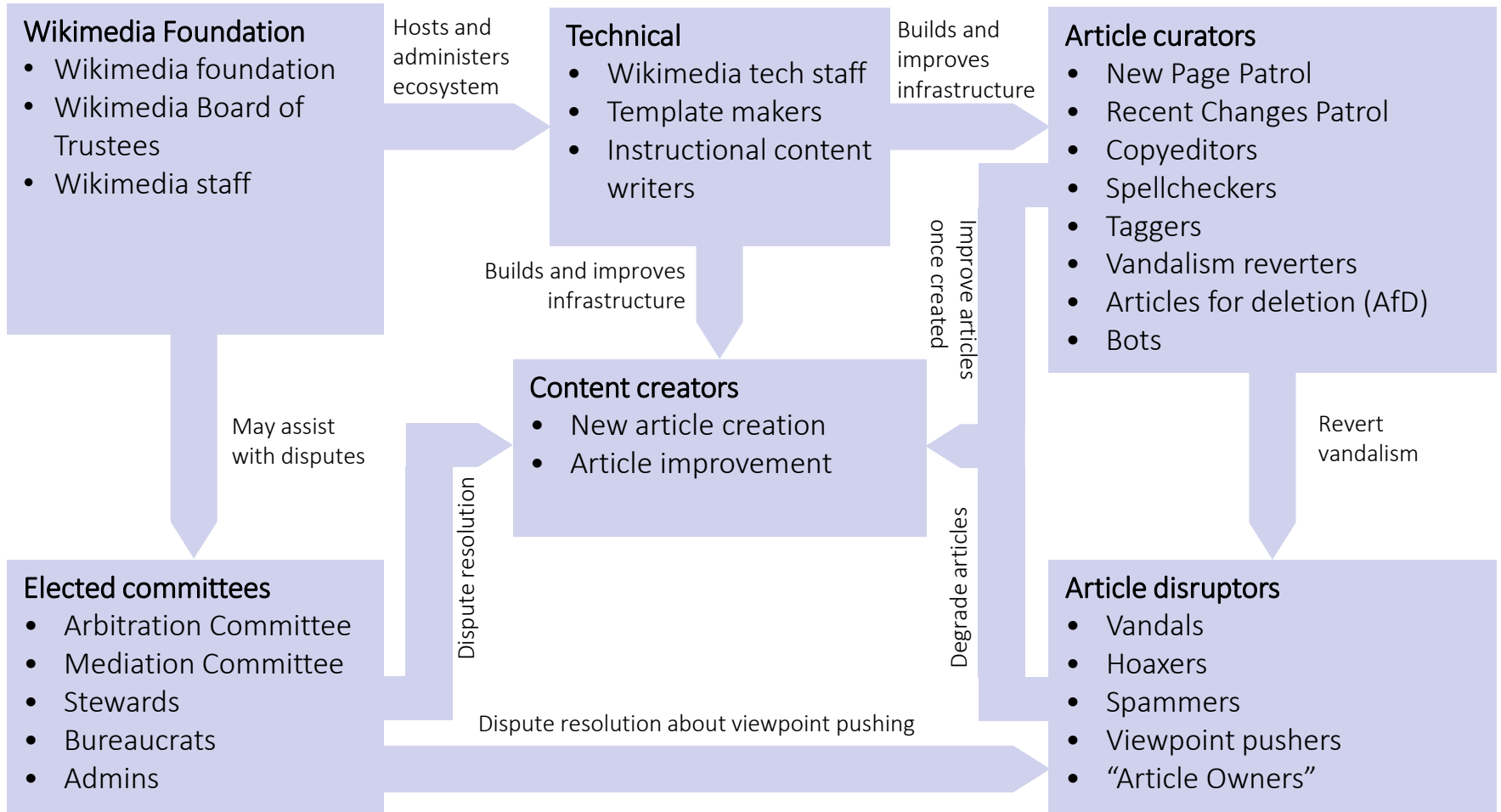
Shafee, T; Mietchen, D; Su, A. (2017). **“Academics can help shape Wikipedia”**. *Science*. 357 (6351): 557–558.

Shafee, T; Masukume, G; Kipersztok, L; Das, D; Häggström, M; Heilman, J. (2017). **“The evolution of Wikipedia’s medical content: past, present and future”**. *JECH*. 71(10).

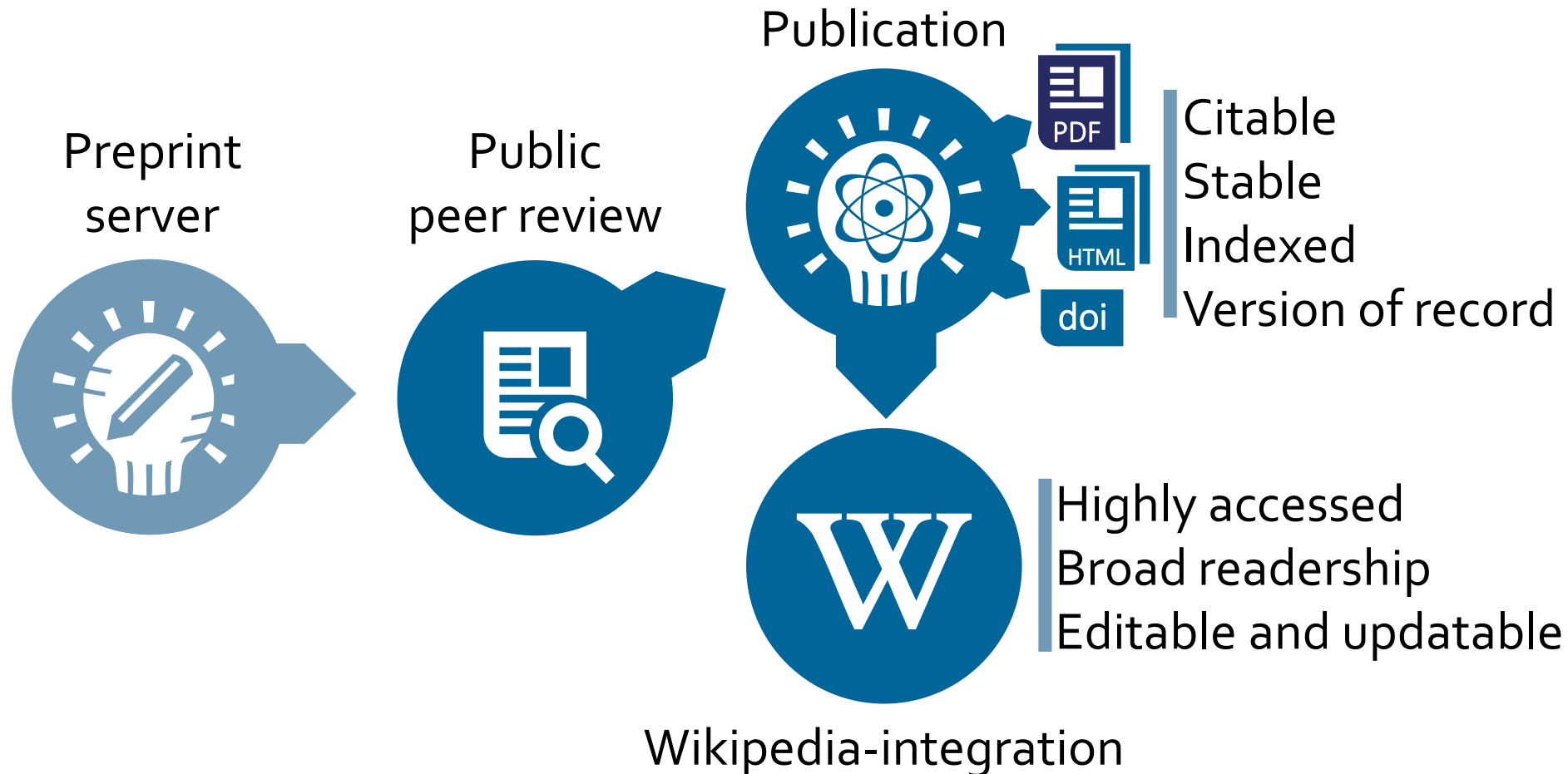
Shafee, T (2017) **“Wikipedia-integrated publishing: A comparison of successful models”**. *Health Inform*. 27(2)

WikiJSci Editorial Board (2018). **“The aims and scope of WikiJournal of Science”**. *WikiJournal of Science* 1(1):1

WHO WRITES WIKIPEDIA?

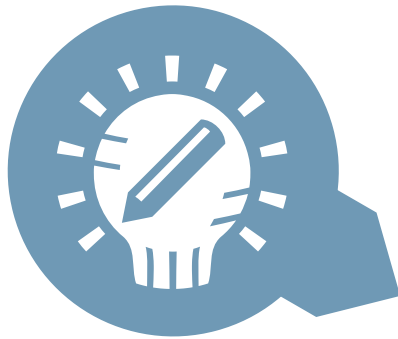


A WIKIJOURNAL'S PUBLISHING FLOW



A WIKIJOURNAL'S PUBLISHING FLOW

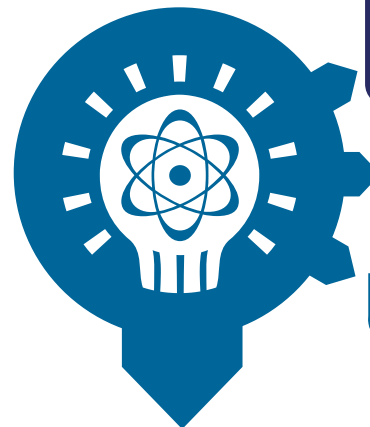
Preprint server



Public peer review



Publication



Citable
Stable
Indexed
Version of record

Highly accessed
Broad readership
Editable and updatable

Wikipedia as preprint

Wikipedia-integration