WIKIPEDIA EDITING FOR SCIENTISTS

A SYMBIOTIC RELATIONSHIP
OUTLINE

WHY SHOULD YOU BE INTERESTED IN EDITING WIKIPEDIA?
- A brief introduction to the largest encyclopaedia of all time
  Why it needs you
  Why you need it

HOW TO EDIT
- Interactive demonstration
  Edit a page
  Upload an image
  Comment on a talk page

HOW TO EDIT RIGHT!
- Differences with scientific writing
  Writing style
  Protocols and policies
  Etiquette and pitfalls

HELP, COMMUNITY AND RESOURCES
- The hidden world behind Wikipedia

Icons: MGalloway WMF (Wikimedia commons)
A BRIEF HISTORY

- 2001 began
- 2007 editing peak
  - But poor accuracy
  - Stricter standards lead to fall-off in editors
- 2015 resurgence
  - Concerted recruitment
  - Easier editing tools
  - First year since 2007 with editor growth
- In 288 languages
- 5th busiest website

Data: http://stats.wikimedia.org/EN/TablesWikipediaEN.htm
**Article Quality and Importance**

- Articles are rated
  - Importance
  - Quality

- Status
  - Displayed on talk page

- Top two quality ratings
  - Promoted by review
  - Status can also be revoked by review

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### Pseudo peer-reviewed

- Top two quality ratings
  - Promoted by review
  - Status can also be revoked by review

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**WikiProject Molecular and Cellular Biology** *(Rated FA-class, Top-importance)*

This article is within the scope of the WikiProject Molecular and Cellular Biology. To participate, visit the WikiProject for more information.

- **FA**
  - This article has been rated as FA-Class on the project's quality scale.
  - This article has been rated as Top-importance on the project's importance scale.

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**Featured article review**

- February 25, 2006: Featured article review
- September 4, 2012: Demoted
- April 18, 2015: Good article nominee
- July 26, 2015: Good article nominee

**Current status:** Former featured article, current good article
WHO EDITS 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 (⅓ of all edits)**
  - Text recognition test to prove human
  - Edits are marked with ip address
  - Can edit >99% of pages

# Why edit Wikipedia?

**Selfless**
- The noble cause of free information
- Giving back to a resource you’ve benefitted from
- Expert input on difficult topics
- Effective public engagement

**Selfish**
- Maximise use of the writing and images that you’ve already done
- Ensure your field is thoroughly and accurately represented
  - First google hit for most topics
  - (Students, Journalists, Reviewers)
- Very large exposure
- Improve your non-specialist writing
WHAT TO EDIT ON WIKIPEDIA?

- **Addition**
  - Information
  - Diagrams
  - References

- **Clarification**
  - Complex concepts

- **Removal**
  - Outdated info
  - Non-notable info

**Categories**
- Modification
- Creation
- Deletion
WIKIPEDIA-AKADEMIA INTEGRATION

Academic publishing directly to Wikipedia
- *PLoS Computational Biology* “Topic” review articles

- *RNA Biology* research articles & Rfam

Academic peer review of existing Wikipedia articles
- *Open journal of Medicine*

- *WikiJournal of Medicine*
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TO TRY EDITING A BLANK TEST PAGE, SIGN UP AND CLICK “SANDBOX”
Editing the article
- Using ‘Visual Editor’ -
- Edit summary -

Adding images
- Uploading -
- Captioning -

Editing talk pages
- Discussion -
- Ratings -
THE TWO WAYS TO EDIT

EDIT SOURCE

- Scripting language (‘Markup’) Versatile with experience

- 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

- References are tricky

== 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. 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] They also generate movement, with [[myosin]] hydrolyzing ATP to generate [[muscle contraction]] and also moving cargo around the cell as part of the [[cytoskeleton]]. 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]].
THE TWO WAYS TO EDIT

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  ===Subheading=== → Subheading

EDIT (VISUALEDITOR)

- Edit like word processing software
  More intuitive

EXAMPLE

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

- Upload image -
- Insert into article -
- Add caption -
- Currently can’t use VisualEditor
  Need to use mark up text
  ~~~~ → Signature

- Header banners
  Page rating
  Wikiproject

- Topic discussion
  Uncertain edits
  Controversial edits
  Suggested improvements
USEFUL PERIPHERAL FEATURES

- 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

- Watchlist
  - Any changes to your favourite pages
  - Wikipedia-wide announcements

- History
  - Permanent record of all versions of a page
  - Summary descriptions and sizes of edits
- 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)

https://creativecommons.org/licenses/by-sa/4.0/
# Creating a New Article

**Upload as Draft:**XYZ
- Using “Articles for Creation” -
  - WP:AFC -

**Editor review**
- Notability -
- Sufficient References -
- Formatting -

**Moved to XYZ page**
- Rating -
- Ongoing improvement -

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**Welcome to Articles for Creation!**

*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](https://en.wikipedia.org/wiki/Wikipedia:Articles_for_creation) 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](https://en.wikipedia.org/wiki/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](https://en.wikipedia.org/wiki/Wikipedia: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](https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Articles_for_creation/Help_desk).

[Click here to create an article now!](https://en.wikipedia.org/wiki/Wikipedia:Articles_for_creation)

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WP:AFC
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Circular Permutation in Proteins

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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 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 permutations can be the result of evolutionary events, post-translational modifications, or artificially engineered mutations. The results can be seen in proteins with different consequences, but overall share similar three-dimensional (3D) shape. The similarity between proteins can be captured by elucidating the similarities between N- and C-terminal portions of the two protein structural domains, or similar motifs.

History

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 bovine protein trypsin, they noticed its similarity to a known protease-inactivating N-enzyme except that the ends were circularly permuted (see Figure 2). Later work confirmed the circular permutation between the two [2] and showed that concanavalin A is a protein post-translationally [3] through deamidation and an unusual protein linkage [4].

After the discovery of a naturally circularly permuted protein, researchers looked for a way to exploit this process. In 1985, David Goldenberg and Thomas Cagchion were able to create a circularly permuted protein by chemically clipping the ligation domain to create a cyclic protein, thus introducing new enzymes without using enzymes [5]. In 1989, Kordich and Lipson introduced a general method for making cyclic permutations by carefully designing and using DNA splicing techniques [6].

The method allowed for the introduction of arbitrary sites, and it is still used today to design circularly permuted proteins in the laboratory.

Despite the early discovery of post-translational circular permutations and the suggestion of a possible genetic mechanism for evolving circular permutations, it was not until 1995 that the first circularly permuted group of genes were discovered. Sequences are a class of proteins involved in sphingolipid biosynthesis and lipid transport in humans [7].

Circular Permutation in proteins

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 peptide structure with different conformation, but overall similar three-dimensional (3D) shape. In 1979, the first pair of naturally permuted proteins – concanavalin A and bovine serum albumin – were discovered, and over 200 more pairs have been known.

Circular permutation can occur as the result of evolutionary events, post-translational modifications, or artificially engineered mutations. The two main models proposed to explain the evolution of circularly permuted proteins are by duplication and fission and fusion. Fusion by duplication occurs when a gene undergoes duplication to form a tandem repeat, before redundant sections of the protein are removed, and this relationship is found between proteins and viruses. Protein and fusion occurs when partial proteins fuse to form a single polypeptide, such as in invertebrate nucleoside hydrolases.

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 circularly permuted proteins. New non-linear approaches have been developed that overcome this and are able to detect topology-independent similarities.

History

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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."
SIMILARITIES TO SCIENTIFIC 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]]

- 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]]
DIFFERENCES TO SCIENTIFIC 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]]
  Open online preference
  Especially for medical statements

  "Active site mutations inactivate enzymes."\(^1\)\(^2\)\(^3\)\(^4\)\(^5\)\(^6\)\(^7\)\(^8\)\(^9\)\(^10\)

- No original research [[WP:NOR]]
  Including synthesis of information
  Can only summarise published work

  "CRISPR-cas9 can be used to edit mammalian genomes."\(^1\)\(^2\)\(^3\)\(^4\)\(^5\)\(^6\)

- Constantly updating work-in-progress [[WP:WIP]]

- Different grades Stub – Start – C – B – A – Good – Featured [[WP:ASSESS]]

"Together, these data indicate..."
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]]
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COMMUNITY

- General community portal [[WP:COM]]
  Help, suggestions, news

- Wikiprojects [[WP:WPDIRE]]
  Molecular and Cell Biology
  Computational biology (Yearly $500 competition)
  Evolutionary biology
  Genetics
  Taxonomy
  Chemistry
  Medicine

Wikipedia:WikiProject Molecular and Cell Biology
A community for editors of — molecular biology · cell biology ·
developmental biology · microbiology

WP:MCB
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_to]]

- Scientist-specific advice
[END]