WIKIPEDIA-INTEGRATED MEDICAL JOURNALS
A KEY HEALTH LITERACY AND OUTREACH PLATFORM
OUTLINE

- Combining reach and rigour
- Implementation models & examples
- What does the future hold
COMBINING REACH AND RIGOUR

COMPATIBLE INTERFACES BETWEEN TWO WORLDS
**WHO READS WIKIPEDIA?**

- **Thesis**: 1-10
- **Median Wikipedia page**: 10,000 pa
- **Median Journal Paper**: 800
- **Top 5% Journal Paper**: 3,000
- **Top 5% Wikipedia page**: 1,000,000 pa

**Readership includes:**
- Patients
- Students
- Journalists
- Lawmakers
- Clinicians

## Similarities and Differences

<table>
<thead>
<tr>
<th></th>
<th>Academic Journal</th>
<th>Wikipedia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readership size</td>
<td>Small and brief&lt;br&gt;Median article - 800 total&lt;br&gt;Top 5% article - 3000 total</td>
<td>Very large and extended&lt;br&gt;Median article - 10,000 per year&lt;br&gt;Top 5% article - 1,000,000 per year</td>
</tr>
<tr>
<td>Readership composition</td>
<td>Other academics, often within narrow field</td>
<td>General public as well as experts and professionals</td>
</tr>
<tr>
<td>Peer review</td>
<td>Pre-publication, private review by 2-4 subject specialists</td>
<td>Post-publication public review of a sort by subject generalists&lt;br&gt;‘Good article’ - 1 reviewer&lt;br&gt;‘Featured Article’ - 5-12 reviewers</td>
</tr>
<tr>
<td>Reputation</td>
<td>Varies by journal but generally extremely high</td>
<td>Public generally trust&lt;br&gt;Academics have mixed opinions by improving</td>
</tr>
<tr>
<td>Authorship</td>
<td>Small number with relevant, accredited expertise. Organised group with lead and corresponding authors.</td>
<td>Large number with mixed expertise levels. Loose organisation. Many pseudonymous or anonymous.</td>
</tr>
<tr>
<td>Timeliness</td>
<td>Static&lt;br&gt;Updated by new publications</td>
<td>Constantly updated&lt;br&gt;Only one consensus version</td>
</tr>
</tbody>
</table>
IMPLEMENTATION MODELS

PRACTICAL AND PROVEN METHODS
BRIDGING THE ACADEMIC DIVIDE

- Content published into both Wikipedia and academic corpus
  - Stable, citable, peer-reviewed journal version
  - Living version with extreme impact of Wikipedia

- Example journals
  - PLOS Genetics
  - PLOS CompBiol
  - PLOS ONE
  - Wiki.J.Med
  - Wiki.J.Sci
  - Wiki.J.Hum
  - Open Medicine
  - Gene
  - RNA Biology


- Compatible with any OA journal
- Simplest workflow
- Well-suited to topics that are missing/start/stub on Wikipedia

- Restricted by Wikipedia’s CC-BY-SA license
- May be only option for highly-developed pages (full replacement typically more difficult Class B and above)

- Compatible with closed journal
- Two versions can be tailored to different audiences
- Increased work for authors and reviewers
WIKIPEDIA
ARTICLE QUALITY

- Articles are rated
  Importance
  Quality
- Top two quality ratings
  Promoted by review
  Can also be revoked by review
- Status
  Displayed on talk page
  Affects ideal updates mechanisms

**Update using Wikipedia page contents as starting point**

**Update by re-writing from scratch**

In all quality ratings cases, individual article sections can typically be rewritten from scratch

---

EXAMPLE CASE STUDIES

FULL REVIEW ARTICLES

- Existing high-quality Wikipedia article updated and submitted
  - Hippocampus

ARTICLE SECTIONS

- Section of Wikipedia article warranted own page
  - Gene structure

- Wikipedia articles previously lacked images
  - Cell disassembly during apoptosis

- Wikipedia article previously existing but flawed/outdated
  - Lysine

- Wikipedia article previously completely absent/stub
  - Anthracyclines
Circular Permutation in Proteins

Spencer Bliven, Andreas Prič

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(s) (near the 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 for the result of evolutionary events, posttranslational modification, or artificially engineered mutations. The result is a protein structure with different connectivity, but overall similar three-dimensional (3D) shape. The relationship between portions of the proteins can be established by observing similar sequences between N- and C-terminal portions of the two-permuted variants of cyclic wild-type proteins [9]. SISYPHUS is a database that contains a collection of hand-curated manual alignments of proteins with structural 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 fusion 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 “two-staple” [14].

References

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


The WikiJournal User Group publish a set of open-access, peer-reviewed academic journals with no publishing costs to authors. Its goal is to provide free, quality-assured knowledge. Secondly, it aims to bridge the Academia-Wikipedia gap by enabling expert contributions in the traditional academic publishing format to improve Wikipedia content.
A WikiJournal’s publishing flow

Preprint server → Public peer review → Publication

- Highly accessed
- Broad readership
- Editable and updatable
- Citable
- Stable
- Indexed
- Version of record

Wikipedia-integration

A WikiJournal’s publishing flow

Preprint server

Public peer review

Wikipedia as preprint

Publication

Citable

Stable

Indexed

Version of record

Highly accessed

Broad readership

Editable and updatable

Wikipedia-integration

Wikipedia as preprint

Preprint server

Public peer review

Versioning

Wikipedia-integration

Publication

Citable
Stable
Indexed
Version of record

Highly accessed
Broad readership
Editable and updatable

COMMITTEE ON PUBLICATION ETHICS

- WikiJMed ethics statement audited and approved by COPE

- WikiJMed.org/Ethics_statement

- Attribution of CC material
  
  Images / videos / other media: Attribution and license type at end of the figure legend
  
  Text <1 paragraph / <10% of final work: Hyperlink to contributor list 'Acknowledgements' section
  
  Text >1 paragraph / >10% of final work: Hyperlink to the full contributor list included in the author list (typically as a hyperlinked "et al"). Treated as “Large group authorship”.

- Ownership
  
  Journal article released by authors under creative commons license of their choice
  
  Material integrated into Wikipedia may be edited by anyone (inc. authors) and will evolve over time

- What constitutes a preprint
  
  Wikipedia can be treated as a preprint server where the submitting author has been a significant contributor

- Dual publication into Wikipedia
  
  Material that complies with Wikipedia’s guidelines (e.g reviews / images) can be directly integrated via CC license
  
  Material that does not (e.g. original research / opinion / speculation) can be cited as a source in a Wikipedia article
SOOOOO... WHO PAYS?

- Reader subscription / author (e.g. *Gene, RNA Biol*)
  Typically charge subscription fees
  Article processing fee of $3300 and $2000 respectively

- Journal fee waiver (e.g. *PLOS*)
  For Topic Page review articles, *PLOS* waives its usual $2250 processing fee

- Charitable foundation (e.g. *Wiki.J.Med.*)
  Web hosting cost is covered by the Wikimedia Foundation
  Editors donate volunteer labour so no fees of any kind
WHAT DOES THE FUTURE HOLD?

MAXIMISING POTENTIAL VALUE
## Wikimédia Journal Hosting Platform

<table>
<thead>
<tr>
<th>Host</th>
<th>Wikipedia Sister project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format</td>
<td></td>
</tr>
<tr>
<td>In whole</td>
<td></td>
</tr>
<tr>
<td>In part</td>
<td></td>
</tr>
<tr>
<td>One-off</td>
<td></td>
</tr>
<tr>
<td>Example</td>
<td></td>
</tr>
<tr>
<td>WikiJournals</td>
<td></td>
</tr>
<tr>
<td>PLOS Genetics</td>
<td></td>
</tr>
<tr>
<td>examples in negotiation</td>
<td></td>
</tr>
<tr>
<td>Features</td>
<td>Free interface for formatting articles ready for Wikipedia</td>
</tr>
<tr>
<td></td>
<td>Expert editors who give free advice and assistance</td>
</tr>
<tr>
<td></td>
<td>Specialist tools for facilitating the process</td>
</tr>
</tbody>
</table>
POSSIBLE PARTNERSHIP SYSTEM

- One-off partnering with subject-specialist journals
  Specialist journal: Invite authors, identify peer reviewers
  WikiJournal: Advises on wikipedia policy compliance, readability and formatting

- Resulting article co-published in specialist journal & WikiJournal

- Then copied into Wikipedia per ‘journal-first’ model

- Co-publishing example:
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 Psychology Search “WP:PSY”

