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

- Combining reach and rigour
- Implementation models
- What does the future hold
COMBINING REACH AND RIGOUR
COMPATIBLE INTERFACES BETWEEN TWO WORLDS
WHO READS WIKIPEDIA?

Thesis: 1-10

Median Journal
Paper: 800

Top 5% Journal
Paper: 3,000

Median Wikipedia page: 10,000 pa

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</td>
<td>Very large and extended</td>
</tr>
<tr>
<td></td>
<td>Median article - 800 total</td>
<td>Median article - 10,000 per year</td>
</tr>
<tr>
<td></td>
<td>Top 5% article - 3000 total</td>
<td>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</td>
</tr>
<tr>
<td></td>
<td></td>
<td>professionals</td>
</tr>
<tr>
<td>Peer review</td>
<td>Pre-publication, private review by 2-4</td>
<td>Post-publication public review of a sort by</td>
</tr>
<tr>
<td></td>
<td>subject specialists</td>
<td>subject generalists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Good article’ - 1 reviewer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘Featured Article’ - 5-12 reviewers</td>
</tr>
<tr>
<td>Reputation</td>
<td>Varies by journal but generally extremely high</td>
<td>Public generally trust</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Academics have mixed opinions by improving</td>
</tr>
<tr>
<td>Authorship</td>
<td>Small number with relevant, accredited expertise.</td>
<td>Large number with mixed expertise levels.</td>
</tr>
<tr>
<td></td>
<td>Organised group with lead and corresponding authors.</td>
<td>Loose organisation. Many pseudonymous or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>anonymous.</td>
</tr>
<tr>
<td>Timeliness</td>
<td>Static</td>
<td>Constantly updated</td>
</tr>
<tr>
<td></td>
<td>Updated by new publications</td>
<td>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

BRIDGING THE ACADEMIC DIVIDE

- Compatible with any OA journal
- Restricted by Wikipedia’s CC-BY-SA license
- May be only option for highly-developed pages (full replacement possible for class C and below)
- Allows two versions to be tailored to different audiences.
- Double the 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

<table>
<thead>
<tr>
<th>Quality</th>
<th>Top</th>
<th>High</th>
<th>Mid</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>FA</td>
<td>1</td>
<td>6</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>GA</td>
<td>2</td>
<td>11</td>
<td>20</td>
<td>41</td>
</tr>
<tr>
<td>B</td>
<td>17</td>
<td>125</td>
<td>200</td>
<td>98</td>
</tr>
<tr>
<td>C</td>
<td>15</td>
<td>161</td>
<td>523</td>
<td>415</td>
</tr>
<tr>
<td>Start</td>
<td>9</td>
<td>174</td>
<td>697</td>
<td>1,433</td>
</tr>
<tr>
<td>Stub</td>
<td>4</td>
<td>96</td>
<td>687</td>
<td></td>
</tr>
<tr>
<td>Absent</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>

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
- Wikipedia article previously existing but flawed/outdated: Lysine
- Wikipedia article previously completely absent/stub: Anthracyclines

**ARTICLE SECTIONS**
- Section of Wikipedia article warranted own page: Gene structure
- Wikipedia articles previously lacked images: Cell disassembly during apoptosis
Circular Permutation in Proteins

Spencer Bliven1, Andreas Pričić2

1 Department of Computer Science, 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, but otherwise preserve their secondary structure. This relationship is expressed by the structure of the protein, rather than by its sequence. The two proteins are called circularly permuted, and the two structures are called homologous.

Evolution

There are two main models that are currently being used to explain the evolution of circularly permuted proteins. The first model, called the “spreading model,” postulates that the evolution of circularly permuted proteins is a result of a change in the primary sequence of the protein. The second model, called the “coincidental model,” postulates that the evolution of circularly permuted proteins is a result of a change in the secondary structure of the protein. Both models are based on the observation that the two proteins have similar amino acid sequences, but differ in their secondary structures.

References

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

Wikipedia-integration

Highly accessed
Broad readership
Editable and updatable

Publication

Citable
Stable
Indexed
Version of record

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

A WikiJournal's Publishing Flow

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
  Materials that do 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
**Wikimedia Journal Hosting Platform**

### Host
- Wikipedia Sister project

### Format
- In whole
- In part
- One-off

### Example
- WikiJournals
- PLOS Genetics
- Examples in negotiation

### Features
- Free interface for formatting articles ready for Wikipedia
- Expert editors who give free advice and assistance
- Specialist tools for facilitating the process
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: