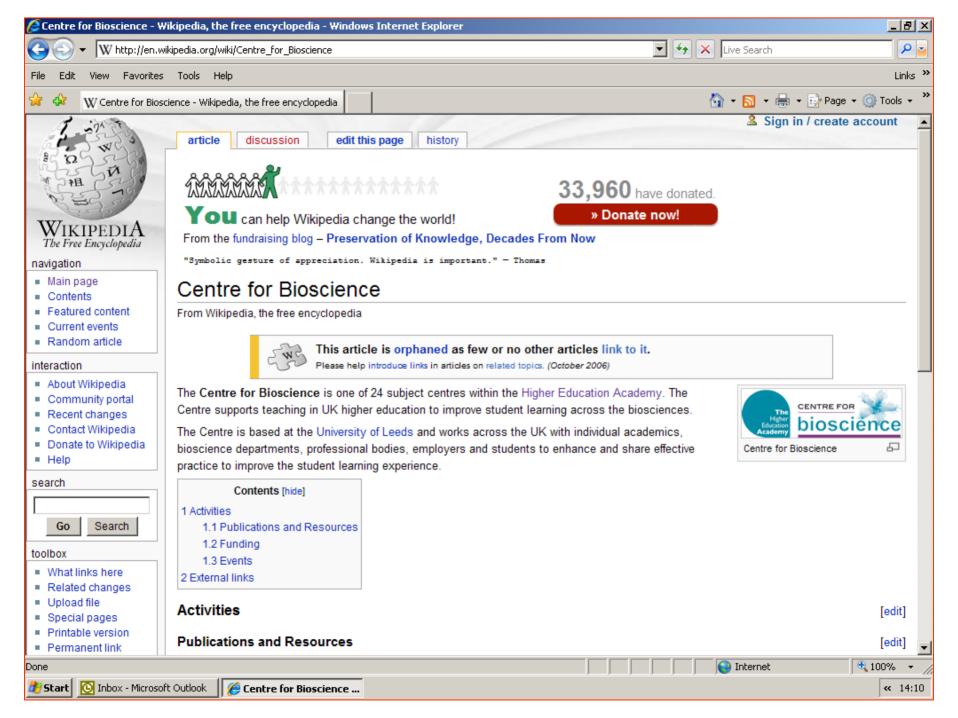
### The Wonderful World of Wikis

#### Dr Viv Rolfe

#### School of Allied Health Sciences







### Why am I interested in it?

- 1<sup>st</sup> year student essay on "why studying cells and tissues is important in science?"
- I was amazed how many students cited Wikipedia in their references and Turnitin identified it as a common source of similar information.

#### Aims

• Analysis of Turnitin reports to see the extent of the problem?

What were students' perceptions of using it?

• Should students be using it?

# **Turnitin Analysis**

- Use of W in reference lists and whether W was identified as a similar source.
- Only assessed significant matches i.e. >2% similarity.
- Caveat T might actually be underestimating:
  Doesn't always go to 1y source of info.
  Doesn't always identify news or very recent info.

# Citing Wikipedia?

• Out of 76 students:

- 29% cited W in their reference lists.
- -4% cited W more than once.

### Similarity matched to Wikipedia?

Inbox for: Describe	e why the study of cells and tissues is imp. show: new 💌		show: low	1□[ ↔	high	<b>↑</b> ≣ submit	<u>Roster</u> Sync
🗌 author 🕶	title 🔻	report 🕶	grade	gm	file	paper ID	date 🔻
	explain why the study of cells and tissu	77%			🔁.doc	582325	15-12-06
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	why the study of structure and functions	57%			🕞.doc	579850	14-12-06
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exclude quoted exclude bibliography

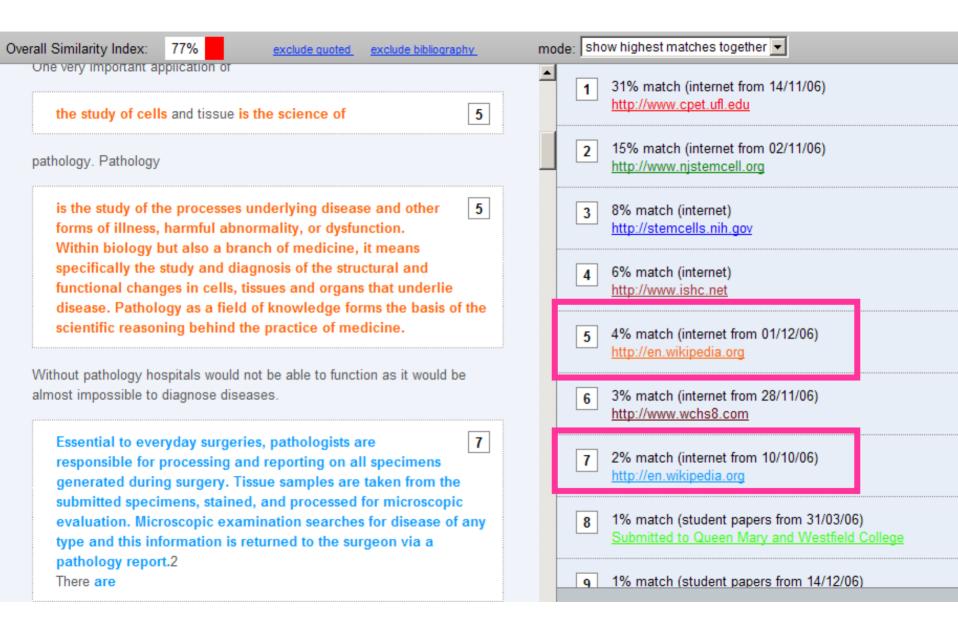
5

In most gene therapy studies, a "normal" gene is inserted 1 into the genome to replace an "abnormal," diseasecausing gene. A carrier molecule called a vector must be used to deliver the therapeutic gene to the patient's target cells. Currently, the most common vector is a virus that has been genetically altered to carry normal human DNA. Viruses have evolved a way of encapsulating and delivering their genes to human cells in a pathogenic manner. Scientists have tried to take advantage of this capability and manipulate the virus genome to remove disease-causing genes and insert therapeutic genes. 5

Target cells such as the patient's liver or lung cells are infected with the viral vector. The vector then unloads its genetic material containing the therapeutic human gene into the target cell. The generation of a functional protein product from the therapeutic gene restores the target cell to a normal state.

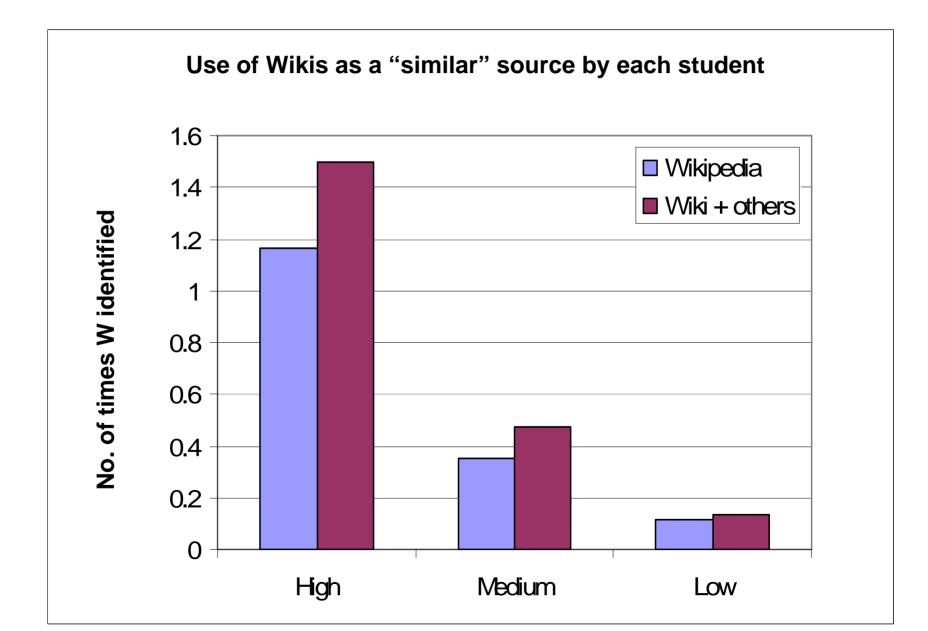
Besides virus-mediated gene-delivery systems, there are 1 several nonviral options for gene delivery. The simplest method is the direct introduction of therapeutic DNA into target cells. This approach is limited in its application because it can be used only with certain tissues and requires large amounts of **DNA.** 4

mode: show highest matches together -٠ 31% match (internet from 14/11/06) 1 http://www.cpet.ufl.edu 15% match (internet from 02/11/06) 2 http://www.njstemcell.org 8% match (internet) 3 http://stemcells.nih.gov 6% match (internet) 4 http://www.ishc.net 4% match (internet from 01/12/06) 5 http://en.wikipedia.org 3% match (internet from 28/11/06) 6 http://www.wchs8.com 2% match (internet from 10/10/06) 7 http://en.wikipedia.org 1% match (student papers from 31/03/06) 8 Submitted to Queen Mary and Westfield College 1% match (student papers from 14/12/06) 9



Levels of similarity	Number of students	Average no. of T similar sources
High (>50%)	6	7.2
Moderate (25- 50%)	17	4.0
Low (<25%)	53	1.5

#### How many times was W cited as a similar source?



#### "Others"

- Websites that use Wikipedia information or are alternative Wikis:
- http://www.witwib.com
- http://www.biologydaily.com
- http://www.unipedia.info
- <u>http://www.encyclopedia.com</u>
- http://www.wikifaq.com

### Summary

 Surprisingly (to me) high number (third) of 1<sup>st</sup> year students cited Wikipedia as a scientific resource.

• There was a relationship between use of Wikipedia and poorer academic practice.



# To WIKI or not to WIKI, that is the question?

### The Yay's....



#### From The Times

April 11, 2007

# Wikipedia a force for good? Nonsense, says a co-founder

Alexandra Frean, Education Editor

The founder of the Wikipedia online encyclopaedia criticised the Education Secretary yesterday for suggesting that the website could be a good educational tool for children.

Mr Johnson described the internet as "an incredible force for good in education" for teachers and pupils, singling out Wikipedia for praise.

"Wikipedia enables anybody to access information which was once the preserve only of those who could afford the subscription to Encyclopaedia Britannica and could spend the time necessary to navigate its maze of indexes and content pages," he told the annual conference of the National Association of Schoolteachers and Union of Women Teachers (NASUWT) in Belfast.

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#### TIMES RECOMMENDS

- UK headed for cyber 'cold war'
- 25 million reasons to feel digital vertigo
- The games helmet that reads minds

Jim Giles, 2005, Nature paper.



#### Study: Wikipedia as accurate as Britannica

By Daniel Terdiman Staff Writer, CNET News.com Published: December 15, 2005, 3:35 PM PST

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Wikipedia is about as good a source of accurate information as Britannica, the venerable standard-bearer of facts about the world around us, according to a study published this week in the journal Nature.

Over the last couple of weeks, Wikipedia, the free, open-access encyclopedia, has taken a great deal of flak in the press for problems related to the credibility of its authors and its general accountability.



### ...but actually,

- Jim Giles, 2005, Nature paper.
- Analysed 42 subjects.
- Wikipedia (162 errors) contained a third more errors than Encyclopedia Britannica (124 total errors).

#### Student perception

- Discussions in 4 CAL lab tutorials (n=21).
- Wikipedia is popular with students "one of the first places I look for information".
- Lack of understanding of what good scientific evidence was and how to identify it.
- I wanted to harvest their enthusiasm for it to demonstrate good scientific practice.

#### Exercise

• Worksheet on the topic of flatulence (as part of gut physiology lecture series).

 Comparison of Wikipedia to Medline resources, looking at accuracy, currency, authority, etc.

### Accuracy...

- Looked at whether a statement was factually correct:
- "Anything that causes food to be incompletely digested in the small intestine may cause flatulence when the material arrives in the large intestine due to fermentation, particularly if yeast organisms are present". Wikipedia 2007

#### Accuracy...

• "Certain spices counteract the production of intestinal gas, most notably cumin, caraway......". Wikipedia 2007.

#### Students' conclusions

• It is not robust scientific evidence.

- Unknown authorship makes citation difficult.
- Could be used to generate key words when faced with a new subject.

### Authorship

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-	(cur) (last) 🔿	05:07, 4 November 2007 ClueBot (Talk   contribs) (33,371 bytes) (Reverting possible vandalism by					
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•	(cur) (last) 🔿	04:16, 2 November 2007 141.151.24.241 (Talk) (33,525 bytes) (undo)					
-	(cur) (last) 🔿	00:21, 2 November 2007 CounterVandalismBot (Talk   contribs) m (33,371 bytes) (Automatically reverting possible					

vandalism by 68.126.153.61 to last good revision by 164.167.34.67) (undo)

### Vandalism

• Barking spiders.

• Barbra Streisand.

# My conclusions

- Giving 1<sup>st</sup> years a free reign to use W is a useful way of discussing scientific evidence and developing critical evaluation skills.
- I wouldn't expect yr 2 and 3 students to cite Wikipedia!
- Too many intrinsic problems to be a reliable source but some of this is changing.
- Universities are using W in creative ways to assess student contributions, rather than a blanket ban.

#### Bill Gates - Wikipedia, the free encyclopedia

<u>File Edit View Bookmarks Tools Help</u>

http://en.wikipedia.org/wiki/Bill\_Gates



#### Bill Gates

From Wikipedia, the free encyclopedia.

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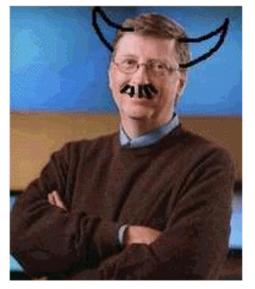


For other uses, see Bill Gates (disambiguation).

**William Henry Gates III** (born October 28, 1955) is the co-founder, chairman, and chief software architect of Microsoft Corporation, the world's largest computer software company. According to *Forbes* magazine, Gates is the world's wealthiest person, with a net worth of approximately US\$51 billion, as of September 2005)<sup>[3]</sup>.

Gates is one of the best-known entrepreneurs of the personal computer revolution and has become an iconic figure of late-20th century capitalism. While widely

#### Bill Gates



#### December 19, 2005: Another geek with a crayon edits Wikipedia

http://www.wikipedia-watch.org/vandals.html