Wiki Writing Guide

by iGEM 2019

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Introduction

The goal of this guide is to give a direction to writing style and to denote conventions to be used when writing. Of course writing style will still vary from person to person, but by adopting relatively strict style guides we can minimize variance. This guide is by no means complete and if you are uncertain about anything you can read some of the sources at the bottom or ask the wiki team.

Style

The general style of the wiki tends to be in-line with that of molecular biology papers. Some of the pages, like the introduction & description, are expected to be read by a wider audience and will be written in more casual way. Even tough scientific writing guidelines tend to be quite restrictive, the written text need not be boring. Within these confines you are encouraged to write in a clear and compelling manner. When writing one of the most important things is to stay clear, cohearent and consistent in form (i.e. voice, tense, notation, citation, etc.). The goal of this document is to provide some handle bars to be able to do so.

All of the wiki will be written in English, but it is important to remember that English is not the native language of most of the scientists around the world, therefore it is important to keep your writing relatively **simple** where possible, **minimizing jargon, abbreviations and complex sentences**. Try to make every word count, by reducing you word count without losing important information.

In general you should write your text in the **third person**. You should favour writing a **passive voice** (e.g. the pipette was moved; the solution was mixed) , but you can use to active voice (meaning the subject of the sentence performed the verb, e.g. the pipette moved) sparingly for emphasis. You should also write in the **past tense**.

When citing text one should almost always **avoid direct quoting** of text, but should try to paraphrase the text. The exception can be made for paying tribute to historical scientific figures.

Spelling

As iGEM is an American competition, **American** spellings are preferred over British spellings.

Differences in spellings, from British to American, usually involve:

- swap of the letters “r” and “e”, such as “centre” (British) and “center” (American)
- addition of the letter “l”, such as “cancelled” (British) and “canceled” (American)
- use of letter “s” instead of letter “z”, such as “characterise”/“analyse” (British) and “characterize”/“analyze” (American)
- addition of letter “a” or “o” with letter “e”, such as “haematology”/“foetus” (British) and “hematology”/“fetus” (American)
- addition of letter “u”, such as “tumour”/“mould” (British) and “tumor”/“mold” (American)
- use of “ph” for “f”, such as “sulphate” (British) and “sulfate” (American)

Conventions

Citations

Citations should be made using a **number** notation with **square brackets**. The references should be in the order as they appear in the text. References are done in the **APA style**.

Examples: [1] for a single reference or [1,3,5-7] for multiple references

Taxonomy

Genus and species are always *italicised*, higher orders are not. Genus and higher orders start with an uppercase, species has a lower case

Examples: *Xylella fastidiosa*, order: Xanthomonadales

On a page when mentioning an organism, write out the full genus and species the **first** time. After that, **abbreviate the genus** with it's first letter (still uppercase).

Phages are **not** italicized and in **lowercase** (unless convention dictates otherwise i.e. T7). Write out the Greek letters used in phage names (i.e. lambda).

Genes

Gene symbols are typically composed of **three lower-case, italicized letters** that serve as an abbreviation of the process or pathway in which the gene product is involved (e.g., *rpo* genes encode RNA polymerase). To distinguish among different alleles, the abbreviation is followed by an **upper-case letter** (e.g., the *rpoB* gene encodes the β subunit of RNA polymerase).

Proteins

Protein symbols are not italicized, and the first letter is upper-case (e.g., RpoB).

As restriction enzymes are also proteins they are not italicized (an old convention).

Example: EcoRI, BamHI, HxfA

Abbreviations

Abbreviations should be written out the first time they are referenced on **every** page. Start off with the written abbreviation that has every letter used in the abbreviation **capitalized**. Follow up with the abbreviation in brackets directly after. On the rest of the page you use the abbreviation.

Example: Phage Delivery Vehicle (PDV)

More Italics

Further common thing that are italicized include loci and alleles; parts of chemical names as appropriate (including *cis, trans, ortho, meta,* and *para*); all variables (e.g., probability (*P* or *p*)); and written-out Latin forms (such as *a priori, ad libitum, de novo, in situ, in utero, in vitro,* and *in vivo*). Also italicize *versus*.

Do not italicize “e.g.”, “et al.”, “i.e.”, " vs." and “etc.”.

Amino Acids

When describing amino acids, try to use their three letter code (of not to inconvenient).

Examples: Arg506Gln, Met-Phe-Val-Asn-Gln-His

Capitalization

When a sentence begins with an abbreviation or designation that has an initial lowercase letter, the abbreviation or designation retains its lowercase.

Example: "Our study determined the protein to be p53. p53 has been studied extensively."

Numbers

Numbers should make use of a "." to denote the decimal point and numbers of a 1,000 or higher should use a "," every three numbers from the right. Try to avoid the use of fractions in measurements, use decimals instead.

Write out at the beginning of a sentence. Write out one to nine except with units of measure. Use numerals for 10 and above.

Units

Use SI units like "l", "g", "kg". mol/l should be written is "M".

Figures, Tables and Equations

These are always start with an **uppercase** but never italicized. Do **not** abbreviate Figure.

Examples: "Figure 1: a picture of ...", "In Figure 1 you can see that ..."

Versus

Use **italics**. Write out "*versus*" in text, but it is OK to use "*vs.*" in tables.

Word choices

Xylella fastidiosa

Use either "***X. fastidiosa***" or "**pathogen**", do not use "bacterium" (to avoid confusion).

Plant host

Describe the plant with "**plant host**" or "**host**". Use "**infection**" to describe *X. fastidiosa* entering the host and call plants with the pathogen inside "infected plants" (Do not use "colonization" in this context to avoid confusion).

Insect vector

Describe the insect with "**insect vector**" or "vector". Use "**colonization**" to describe *X. fastidiosa* establishing himself in the insect. Avoid using "infected insects/vectors".

GE bacterium with phage plasmid

The official name for this bacterium is: **Phage Delivery Bacterium (PDB)**. Because we want to avoid using the name bacterium, as it is too unambiguous, **use the abbreviation** (writing it out the first time you use it on a page).

Bacteriophage

The first time on a page you use "**bacteriophage**", after that you reffer to it as "**phage**".

The Project/Team

Use the brand name "**Xylencer**" to describe the project and use "the Xylencer team" to describe the team. Avoid saying "our project" or "the team", we want to ingrain the brand name.

GE phages

The phage with the adhesion protein is called: "**adhesion phage**", the phage with the MAMP gene is called "**MAMP phage**" and the phage with both the adhesion and MAMP protein is called the "**Xylencer phage**".

Genetic engineering/modification

In scientific texts you use "**genetic modification**", in non-scientific text you use "**enhancement**" instead of genetic modification, i.e. enhanced phage.

Mistakes to avoid

- *Because vs. Since*: "Since"implies time. "Because"gives a reason. Although in other disciplines these words may be interchangeable, successful biology writers avoid using "since" when

"because" represents the better choice.

- *Affect vs. Effect*: "Affect" is a verb. "Effect" is a noun.
- *While vs. Although*: "While" means "simultaneously." If you mean to contrast two things, try "although," or "whereas."
- *i.e. vs. e.g.*: The first means "that is" (Latin id est) and is followed by an explanation. The second means "for example" (Latin exempli gratia) is followed by an example.
- *Data*: "Data **are**." Use the plural.
- *Species*: The word is both singular and plural.

Sources

https://www.ncbi.nlm.nih.gov/books/NBK995/

https://www.biosciencewriters.com/Guidelines-for-Formatting-Gene-and-Protein-Names.aspx

https://www.southwestern.edu/live/files/4637-biology-department-writing-guide