

Unilateral corneal insult in Zebrafish results in a bilateral cell shape and identity modification, supporting wound closure

What is the Manuscript Microscope Sentence Audit?

The Manuscript Microscope Sentence Audit is a research paper introspection system that parses the text of your manuscript into minimal sentence components for faster, more accurate, enhanced proofreading.

Why use a Sentence Audit to proofread your manuscript?

- **Accelerated Proofreading:** Examine long technical texts in a fraction of the usual time.
- **Superior Proofreading:** Detect subtle errors that are invisible to traditional methods.
- **Focused Proofreading:** Inspect each individual sentence component in isolation.
- **Reliable Proofreading:** Ensure every single word of your manuscript is correct.
- **Easier Proofreading:** Take the hardship out of crafting academic papers.

Bonus 1: **Improved Productivity:** Rapidly refine rough drafts to polished papers.

Bonus 2: **Improved Authorship:** Cultivate a clear, concise, consistent, writing style.

Bonus 3: **Improved Reputation:** Become known for rigorously precise publications.

Manuscript Source: <https://www.biorxiv.org/content/10.1101/2021.03.21.436164v1>

Manuscript Authors: Kaisa Ikkala, Vassilis Stratoulas & Frederic Michon

Features of the Sentence Audit:

The Sentence Audit combines two complementary proofreading approaches:

1. Each sentence of your text is parsed and displayed in isolation for focused inspection.
2. Each individual sentence is further parsed into Minimal Sentence Components for a deeper review of the clarity, composition and consistency of the language you used.

The Minimal Sentence Components shown are the smallest coherent elements of each sentence of your text as derived from it's conjunctions, prepositions and selected punctuation symbols (i.e. commas, semicolons, round and square brackets).

The combined approaches ensure easier, faster, more effective proofreading.

Comments and Caveats:

- The sentence parsing is achieved using a prototype natural language processing pipeline written in Python and may include occasional errors in sentence segmentation.
- Depending on the source of the input text, the Sentence Audit may contain occasional html artefacts that are parsed as sentences (E.g. "Download figure. Open in new tab").
- Always consult the original research paper as the true reference source for the text.

Contact Information:

To get a Manuscript Microscope Sentence Audit of any other research paper, simply forward any copy of the text to John.James@OxfordResearchServices.com.

All queries, feedback or suggestions are also very welcome.

Research Paper Sections:

The sections of the research paper input text parsed in this audit.

[illegible]

Title **Unilateral corneal insult in Zebrafish results in a bilateral cell shape and identity modification, supporting wound closure**

S1 [001] Abstract

S1 [002] Most of terrestrial and aquatic vertebrates are equipped with camera-type eyes, offering a focused and clear sight.

Most ...
... of terrestrial ...
... and aquatic vertebrates are equipped ...
... with camera-type eyes, ...
... offering a focused ...
... and clear sight.

S1 [003] This apparatus is rendered inefficient if its most superficial and transparent element, the cornea, is opaque.

This apparatus is rendered inefficient ...
... if its most superficial ...
... and transparent element, ...
... the cornea, ...
... is opaque.

S1 [004] This structure, prone to environmental aggressions, bears excellent wound healing capabilities to preserve vision.

This structure, ...
... prone ...
... to environmental aggressions, ...
... bears excellent wound healing capabilities ...
... to preserve vision.

S1 [005] Up to date, most of the corneal wound healing studies are made on mammals.

Up ...
... to date, ...
... most of the corneal wound healing studies are made ...
... on mammals.

S1 [006] Here, for the first time, zebrafish is used as model to study wound closure of corneal epithelium after abrasion.

Here, ...
... for the first time, ...
... zebrafish is used ...
... as model ...
... to study wound closure ...
... of corneal epithelium ...

... after abrasion.

S1 [007] Our study demonstrates a swift wound closure after corneal insult.

Our study demonstrates a swift wound closure ...
... after corneal insult.

S1 [008] Interestingly, a unilateral wound induces a bilateral response.

Interestingly, ...
... a unilateral wound induces a bilateral response.

S1 [009] While cell proliferation is increased during wound closure, this parameter is not crucial, and cell rearrangements seems to be the driving force.

While cell proliferation is increased ...
... during wound closure, ...
... this parameter is not crucial, ...
... and cell rearrangements seems ...
... to be the driving force.

S1 [010] Furthermore, we discovered a profound change in epithelial cell transcriptomic signature after abrasion, reflecting a modulation of cell identity and increase of phenotypic plasticity.

Furthermore, ...
... we discovered a profound change ...
... in epithelial cell transcriptomic signature ...
... after abrasion, ...
... reflecting a modulation ...
... of cell identity ...
... and increase ...
... of phenotypic plasticity.

S1 [011] The latter seems to unlock terminally differentiated cell capacities for wound healing, which could be the key for a speed up organ regeneration.

The latter seems ...
... to unlock terminally differentiated cell capacities ...
... for wound healing, ...
... which could be the key ...
... for a speed up organ regeneration.

S1 [012] Our results prove that zebrafish cornea is a powerful model to investigate, not only corneal wound healing, but ectodermal organ pathophysiology.

Our results prove ...
... that zebrafish cornea is a powerful model ...
... to investigate, ...
... not ...
... only corneal wound healing, ...
... but ectodermal organ pathophysiology.

S2 [013] Introduction

S2 [014] Since the first simple photosensitive cells, that can still be found in some mollusks and worms, eyes have evolved towards a complex anatomy.

Since the first simple photosensitive cells, ...
... that can still be found ...
... in some mollusks ...
... and worms, ...
... eyes have evolved towards a complex anatomy.

S2 [015] A direction in eye evolution was the generation of the anterior segment structures, which are needed to focus light on the photoreceptors forming the retina.

A direction ...
... in eye evolution was the generation ...
... of the anterior segment structures, ...
... which are needed ...
... to focus light ...
... on the photoreceptors forming the retina.

S2 [016] One of the most complex eye types is the camera-type eye and is found both in aquatic and in terrestrial animals.

One ...
... of the most complex eye types is the camera-type eye ...
... and is found both ...
... in aquatic ...
... and in terrestrial animals.

S2 [017] The main innovation of this eye type was the generation of lens and cornea, both structures derived from the ectoderm and transparent.

The main innovation ...
... of this eye type was the generation ...
... of lens ...
... and cornea, ...
... both structures derived ...
... from the ectoderm ...
... and transparent.

S2 [018] The refractive lens focuses precisely the light onto the retina (Ayala, 2007).

The refractive lens focuses precisely the light ...
... onto the retina ...
... (Ayala, 2007).

S2 [019] The cornea is a thin structure serving two roles.

The cornea is a thin structure serving two roles.

- S2 [020]** First, the highly cohesive epithelial cells protect the eye inner chamber from pathogens and water loss.
- First, ...
... the highly cohesive epithelial cells protect the eye inner chamber ...
... from pathogens ...
... and water loss.
- S2 [021]** Then, corneal organization and transparency form a refractive layer, key element for clear sight.
- Then, ...
... corneal organization ...
... and transparency form a refractive layer, ...
... key element ...
... for clear sight.
- S2 [022]** In terrestrial animals, corneal microenvironment is composed of cell-cell contacts, dense innervation and tear film.
- In terrestrial animals, ...
... corneal microenvironment is composed ...
... of cell-cell contacts, ...
... dense innervation ...
... and tear film.
- S2 [023]** The latter is source of hydration and nutrients to the epithelium (Zieske, 2004).
- The latter is source ...
... of hydration ...
... and nutrients ...
... to the epithelium ...
... (Zieske, 2004).
- S2 [024]** When the tear film is defected, a progressive corneal degeneration is triggered, which can lead to corneal opacification, and ultimately corneal related blindness.
- When the tear film is defected, ...
... a progressive corneal degeneration is triggered, ...
... which can lead ...
... to corneal opacification, ...
... and ultimately corneal related blindness.
- S2 [025]** Evidently, in aquatic environment, the tear film is lacking, and there is no evidence on the source of nutrients for corneal epithelium.
- Evidently, ...
... in aquatic environment, ...
... the tear film is lacking, ...
... and there is no evidence ...
... on the source ...
... of nutrients ...
... for corneal epithelium.

End of Sample Audit

This is a truncated Manuscript Microscope Sample Audit.

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