A Manuscript Microscope 'Sentence Audit' of:

Inhibiting microglia proliferation after spinal cord injury improves recovery in mice and nonhuman primates

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/10.1101/2021.03.06.434049v1

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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.

Section No.	Headings	Sentences
Section: 1	Abstract	11
Section: 2	Introduction	16
N/A	--- --- --- --- --- --- ---	0
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The Sentence Audit Of The Research Paper

Title **Inhibiting microglia proliferation after spinal cord injury improves recovery in mice and nonhuman primates**

S1 [001] Abstract

S1 [002] No curative treatment is available for any deficits induced by spinal cord injury (SCI).

No curative treatment is available ...
... for any deficits induced ...
... by spinal cord injury ...
... (SCI).

S1 [003] Following injury, microglia undergo highly diverse activation processes, including proliferation, and play a critical role on functional recovery.

Following injury, ...
... microglia undergo highly diverse activation processes, ...
... including proliferation, ...
... and play a critical role ...
... on functional recovery.

S1 [004] In a translational objective, we investigated whether a transient pharmacological reduction of microglia proliferation after injury is beneficial for functional recovery after SCI in mice and nonhuman primates.

In a translational objective, ...
... we investigated ...
... whether a transient pharmacological reduction ...
... of microglia proliferation ...
... after injury is beneficial ...
... for functional recovery ...
... after SCI ...
... in mice ...
... and nonhuman primates.

S1 [005] The colony stimulating factor-1 receptor (CSF1R) regulates proliferation, differentiation, and survival of microglia, we thus used an oral administration of GW2580, a CSF1R inhibitor.

The colony stimulating factor-1 receptor ...
... (CSF1R) ...
... regulates proliferation, ...
... differentiation, ...
... and survival ...
... of microglia, ...
... we thus used an oral administration ...
... of GW2580, ...
... a CSF1R inhibitor.

S1 [006] First, transient post-injury GW2580 administration in mice improves motor function recovery, promotes tissues preservation and/or reorganization (identified by coherent anti-stokes Raman scattering microscopy), and modulates glial reactivity.

First, ...
... transient post-injury GW2580 administration ...
... in mice improves motor function recovery, ...
... promotes tissues preservation ...
... and/or reorganization ...
... (identified ...
... by coherent anti-stokes Raman scattering microscopy), ...
... and modulates glial reactivity.

S1 [007] Second, post-injury GW2580-treatment in nonhuman primates reduces microglia proliferation, improves functional motor function recovery, and promotes tissue protection.

Second, ...
... post-injury GW2580-treatment ...
... in nonhuman primates reduces microglia proliferation, ...
... improves functional motor function recovery, ...
... and promotes tissue protection.

S1 [008] Notably, three months after lesion microglia reactivity returned to baseline value.

Notably, ...
... three months ...
... after lesion microglia reactivity returned ...
... to baseline value.

S1 [009] Finally, to initiate the investigation on molecular mechanisms induced by a transient post-SCI GW2580-treatment, we used microglia-specific transcriptomic analysis in mice.

Finally, ...
... to initiate the investigation ...
... on molecular mechanisms induced ...
... by a transient post-SCI GW2580-treatment, ...
... we used microglia-specific transcriptomic analysis ...
... in mice.

S1 [010] Notably, we detected a downregulation in the expression of inflammatory-associated genes and we identified genes that were up-regulated by SCI and further downregulated by the treatment.

Notably, ...
... we detected a downregulation ...
... in the expression ...
... of inflammatory-associated genes ...
... and we identified genes ...
... that were up-regulated ...
... by SCI ...
... and further downregulated ...
... by the treatment.

S1 [011] Thus, a transient oral GW2580 treatment post-injury may provide a promising therapeutic strategy for SCI patients and may also be extended to other central nervous system disorders displaying microglia activation.

Thus, ...
... a transient oral GW2580 treatment post-injury may provide a promising therapeutic strategy ...
... for SCI patients ...
... and may also be extended ...
... to other central nervous system disorders displaying microglia activation.

S2 [012] Introduction

S2 [013] Traumatic spinal cord injury (SCI) results in 0.6 to 0.9 million annual new cases worldwide [1], induces sensory, motor, and autonomic deficits ranging from minimal dysfunctions to complete tetraplegia.

Traumatic spinal cord injury ...
... (SCI) ...
... results ...
... in 0.6 ...
... to 0.9 million annual new cases worldwide ...
... [1], ...
... induces sensory, ...
... motor, ...
... and autonomic deficits ranging ...
... from minimal dysfunctions ...
... to complete tetraplegia.

S2 [014] There is no curative treatment available.

There is no curative treatment available.

S2 [015] Following traumatism, microglia, the resident immunocompetent cells of the central nervous system (CNS) modulate neuroinflammation by releasing both detrimental and beneficial factors to their surrounding cells [for review see [2]].

Following traumatism, ...
... microglia, ...
... the resident immunocompetent cells ...
... of the central nervous system ...
... (CNS) ...
... modulate neuroinflammation ...
... by releasing both detrimental ...
... and beneficial factors ...
... to their surrounding cells ...
... [for review see ...
... [2]].

S2 [016] Microglia response occurs within minutes after SCI and is followed by infiltration of neutrophils and monocyte-derived macrophages from the periphery by 6 hours and 3 days post-lesion, respectively [for review see [3, 4]].

Microglia response occurs ...
... within minutes ...
... after SCI ...
... and is followed by infiltration ...
... of neutrophils ...
... and monocyte-derived macrophages ...
... from the periphery ...
... by 6 hours ...
... and 3 days post-lesion, ...
... respectively ...
... [for review see ...
... [3, 4]...
...].

S2 [017] Infiltrating macrophages suppress microglial activation by reducing their expression of inflammatory molecules and ability to phagocytose, consequently preventing chronic microglia-mediated inflammation and blocking these infiltrating macrophages reduces functional recovery after SCI [5].

Infiltrating macrophages suppress microglial activation ...
... by reducing their expression ...
... of inflammatory molecules ...
... and ability ...
... to phagocytose, ...
... consequently preventing chronic microglia-mediated inflammation ...
... and blocking these infiltrating macrophages reduces functional recovery ...
... after SCI ...
... [5].

S2 [018] Notably, microglia exhibit greater SCI-induced proliferation than infiltrating macrophages [6].

Notably, ...
... microglia exhibit greater SCI-induced proliferation ...
... than infiltrating macrophages ...
... [6].

S2 [019] Moreover, microglial molecular response after SCI is characterized by an early proliferation followed by a concomitant upregulation of pro- and anti-inflammatory factors [7].

Moreover, ...
... microglial molecular response ...
... after SCI is characterized ...
... by an early proliferation followed by a concomitant upregulation ...
... of pro- ...
... and anti-inflammatory factors ...
... [7].

S2 [020] Microglia express the receptor for macrophage colony stimulating factor-1 (CSF1R).

Microglia express the receptor ...

End of Sample Audit

This is a truncated Manuscript Microscope Sample Audit.

To get the full audit of this text (or any other research paper),
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John.James@OxfordResearchServices.com
