A Manuscript Microscope 'Sentence Audit' of:

Hepatic Leukemia Factor supports the propagation of leukemia and hematopoietic stem cell function during stress-induced regeneration

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/10.1101/2021.03.05.434034v1

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Audit Date: 22/03/21 **Audit Identifier:** 5BB55OG3S73EHEO **Code Version:** 3.6

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	9
Section: 2	Methods	18
N/A	--- --- --- --- --- --- ---	0
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The Sentence Audit Of The Research Paper

Title # Hepatic Leukemia Factor supports the propagation of leukemia and hematopoietic stem cell function during stress-induced regeneration

S1 [001] Abstract

S1 [002] The processes regulating hematopoietic stem cells (HSC) during aging are not fully understood1, but it is clear that the incidence of hematological malignancies increases with age, highlighting the importance of unravelling the cellular and molecular networks involved.

The processes regulating hematopoietic stem cells ...
... (HSC) ...
... during aging are not fully understood1, ...
... but it is clear ...
... that the incidence ...
... of hematological malignancies increases ...
... with age, ...
... highlighting the importance ...
... of unravelling the cellular ...
... and molecular networks involved.

S1 [003] Recently, we identified Hepatic Leukemia Factor (HLF) as an essential transcription factor in maintaining the HSC pool during regeneration2 and showed that failure to downregulate HLF leads to disrupted differentiation3.

Recently, ...
... we identified Hepatic Leukemia Factor ...
... (HLF) ...
... as an essential transcription factor ...
... in maintaining the HSC pool ...
... during regeneration2 ...
... and showed ...
... that failure ...
... to downregulate HLF leads ...
... to disrupted differentiation3.

S1 [004] Here, we found that HLF is dispensable for hematopoiesis during systemic aging, but needed during stress-induced hematopoietic recovery of aged HSC after transplantation.

Here, ...
... we found ...
... that HLF is dispensable ...
... for hematopoiesis ...
... during systemic aging, ...
... but needed ...
... during stress-induced hematopoietic recovery ...
... of aged HSC ...
... after transplantation.

S1 [005] Additionally, HLF was dispensable for leukemic initiation but required for disease propagation.

Additionally, ...
... HLF was dispensable ...
... for leukemic initiation ...
... but required ...
... for disease propagation.

S1 [006] Taken together, our findings demonstrate the existence of a HLF-dependent mechanism that uncouples stress-induced regeneration from hematopoietic homeostasis during aging, that can be used by malignant cells to gain stem cell properties to propagate the disease.

Taken together, ...
... our findings demonstrate the existence ...
... of a HLF-dependent mechanism ...
... that uncouples stress-induced regeneration ...
... from hematopoietic homeostasis ...
... during aging, ...
... that can be used ...
... by malignant cells ...
... to gain stem cell properties ...
... to propagate the disease.

S1 [007] Key points

Key points

S1 [008] HLF is dispensable for HSC function and hematopoietic homeostasis during physiological aging, but crucial during stress induced regeneration.

HLF is dispensable ...
... for HSC function ...
... and hematopoietic homeostasis ...
... during physiological aging, ...
... but crucial ...
... during stress induced regeneration.

S1 [009] HLF supports the propagation of leukemia-initiating cells

HLF supports the propagation ...
... of leukemia-initiating cells

S2 [010] Methods

S2 [011] Mice

Mice

S2 [012] The generation of KO mice was previously described4, and mice were backcrossed to achieve pure C57BL/6 background.

The generation ...
... of KO mice was previously described4, ...
... and mice were backcrossed ...
... to achieve pure C57BL/6 background.

S2 [013] Animals were housed in ventilated racks, given autoclaved food and water, and maintained in accordance with Swedish Animal Welfare organisation guidelines, at the Biomedical Center animal facilities in Lund.

Animals were housed ...
... in ventilated racks, ...
... given autoclaved food ...
... and water, ...
... and maintained ...
... in accordance ...
... with Swedish Animal Welfare organisation guidelines, ...
... at the Biomedical Center animal facilities ...
... in Lund.

S2 [014] All animal experiments were approved by local ethical committees (permit M94-15).

All animal experiments were approved ...
... by local ethical committees ...
... (permit M94-15).

S2 [015] Competitive transplantation assay

Competitive transplantation assay

S2 [016] For transplantation, 2 x105 unfractionated cells from BM from 18-month-old mice (CD45.2) were mixed in a 1:1 ratio with 2×105 unfractionated BM competitor cells (CD45.1).

For transplantation, ...
... 2 x105 unfractionated cells ...
... from BM ...
... from 18-month-old mice ...
... (CD45.2) ...
... were mixed ...
... in a 1:1 ratio ...
... with 2×105 unfractionated BM competitor cells ...
... (CD45.1).

S2 [017] For secondary transplant, a femur per donor was split into 2 recipients.

For secondary transplant, ...
... a femur ...
... per donor was split ...
... into 2 recipients.

S2 [018] Grafts were intravenously injected into lethally irradiated (900 cGy) recipients (CD45.1/CD45.2).

Grafts were intravenously injected ...
... into lethally irradiated ...
... (900 cGy) ...
... recipients ...
... (CD45.1/CD45.2).

S2 [019] Generation of MLL/AF9 leukemia

Generation ...
... of MLL/AF9 leukemia

S2 [020] MLL/AF9 leukemia was generated as described in5 from either WT or KO cKit+ cells.

MLL/AF9 leukemia was generated ...
... as described in5 ...
... from either WT ...
... or KO cKit+ cells.

S2 [021] HLF expression was established by semi-quantitative PCR as described in2.

HLF expression was established ...
... by semi-quantitative PCR ...
... as described in2.

S2 [022] Peripheral blood and bone marrow preparation

Peripheral blood ...
... and bone marrow preparation

S2 [023] Peripheral blood (PB) was collected from the tail vein.

Peripheral blood ...
... (PB) ...
... was collected ...
... from the tail vein.

S2 [024] Blood parameters were analyzed using SysmexXE-5000 (Sysmex Europe GmbH).

Blood parameters were analyzed ...
... using SysmexXE-5000 ...
... (Sysmex Europe GmbH).

S2 [025] Before staining, erythrocytes were lysed with NH4Cl (StemCell Technologies).

Before staining, ...
... erythrocytes were lysed ...
... with NH4Cl ...
... (StemCell Technologies).

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
