A Manuscript Microscope 'Sentence Audit' of:

A New Old Tale: Dopamine Transporter implications in an animal model of Attention-Deficit Hyperactivity Disorder

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/10.1101/2021.03.19.436226v1

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Audit Date: 31/03/21 **Audit Identifier:** 701QA8K623O6A55 **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	16
Section: 2	INTRODUCTION	11
N/A	--- --- --- --- --- --- ---	0
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The Sentence Audit Of The Research Paper

Title **A New Old Tale: Dopamine Transporter implications in an animal model of Attention-Deficit Hyperactivity Disorder**

S1 [001] ABSTRACT

S1 [002] Attention deficit/Hyperactivity disorder (ADHD) is one of the most diagnosed psychiatric disorders nowadays.

Attention deficit/Hyperactivity disorder ...
... (ADHD) ...
... is one ...
... of the most diagnosed psychiatric disorders nowadays.

S1 [003] The core symptoms of the condition include hyperactivity, impulsiveness and inattention.

The core symptoms ...
... of the condition include hyperactivity, ...
... impulsiveness ...
... and inattention.

S1 [004] The main pharmacological treatment consists of psychostimulant drugs affecting Dopamine Transporter (DAT) function.

The main pharmacological treatment consists ...
... of psychostimulant drugs affecting Dopamine Transporter ...
... (DAT) ...
... function.

S1 [005] We have previously shown that genetically modified mice lacking p35 protein (p35KO), which have reduced Cdk5 activity, present key hallmarks resembling those described in animal models useful for studying ADHD.

We have previously shown ...
... that genetically modified mice lacking p35 protein ...
... (p35KO), ...
... which have reduced Cdk5 activity, ...
... present key hallmarks resembling those described ...
... in animal models useful ...
... for studying ADHD.

S1 [006] The p35KO mouse displays spontaneous hyperactivity and shows a calming effect of methylphenidate or amphetamine treatment.

The p35KO mouse displays spontaneous hyperactivity ...
... and shows a calming effect ...
... of methylphenidate ...
... or amphetamine treatment.

S1 [007] Interestingly, dopaminergic neurotransmission is altered in these mice as they have an increased Dopamine (DA) content together with a low DA turnover.

Interestingly, ...
... dopaminergic neurotransmission is altered ...
... in these mice ...
... as they have an increased Dopamine ...
... (DA) ...
... content together ...
... with a low DA turnover.

S1 [008] This led us to hypothesize that the lack of Cdk5 activity affects DAT expression and/or function in this animal model.

This led us ...
... to hypothesize ...
... that the lack ...
... of Cdk5 activity affects DAT expression ...
... and/or function ...
... in this animal model.

S1 [009] In this study, we performed biochemical assays, cell-based approaches, quantitative fluorescence analysis and functional studies that allowed us to demonstrate that p35KO mice exhibit decreased DA uptake and reduced cell surface DAT expression levels in the striatum.

In this study, ...
... we performed biochemical assays, ...
... cell-based approaches, ...
... quantitative fluorescence analysis ...
... and functional studies ...
... that allowed us ...
... to demonstrate ...
... that p35KO mice exhibit decreased DA uptake ...
... and reduced cell surface DAT expression levels ...
... in the striatum.

S1 [010] These findings are supported by in vitro observations in which the inhibition of Cdk5 activity in N2a cells induced a significant increase in constitutive DAT endocytosis with a concomitant increase in DAT localization to recycling endosomes.

These findings are supported ...
... by in vitro observations ...
... in which the inhibition ...
... of Cdk5 activity ...
... in N2a cells induced a significant increase ...
... in constitutive DAT endocytosis ...
... with a concomitant increase ...
... in DAT localization ...
... to recycling endosomes.

S1 [011] Taken together, these data provide strong evidence regarding the role of Cdk5 activity in DAT trafficking and function, thus contributing to the knowledge of DA neurotransmission physiology and also providing therapeutic options for the treatment of DA pathologies such as ADHD.

Taken together, ...
... these data provide strong evidence regarding the role ...
... of Cdk5 activity ...
... in DAT trafficking ...
... and function, ...
... thus contributing ...
... to the knowledge ...
... of DA neurotransmission physiology ...
... and also providing therapeutic options ...
... for the treatment ...
... of DA pathologies ...
... such as ADHD.

S1 [012] HIGHLIGHTS

HIGHLIGHTS

S1 [013] Mice lacking p35 (p35KO) exhibit diminished surface DAT expression in the striatum

Mice lacking p35 ...
... (p35KO) ...
... exhibit diminished surface DAT expression ...
... in the striatum

S1 [014] Amperometric experiments show decreased DA uptake in the striatum of p35KO mice

Amperometric experiments show decreased DA uptake ...
... in the striatum ...
... of p35KO mice

S1 [015] Cdk5 inhibition increases DAT endocytosis in N2a cells

Cdk5 inhibition increases DAT endocytosis ...
... in N2a cells

S1 [016] Lack of Cdk5 activity increases DAT localization in Rab11 positive endosomes

Lack ...
... of Cdk5 activity increases DAT localization ...
... in Rab11 positive endosomes

S2 [017] INTRODUCTION

S2 [018] Attention Deficit Hyperactivity Disorder (ADHD) is a complex, chronic and highly heritable neurodevelopmental disorder with typical onset in childhood and known persistence into adulthood (Sharma and Couture, 2014).

Attention Deficit Hyperactivity Disorder ...
... (ADHD) ...
... is a complex, ...
... chronic ...
... and highly heritable neurodevelopmental disorder ...
... with typical onset ...
... in childhood ...
... and known persistence ...
... into adulthood ...
... (Sharma ...
... and Couture, 2014).

S2 [019] Like other neuropsychiatric disorders, ADHD presents a spectrum of behavioral alterations with motor hyperactivity features, impulsivity, and/or inattention; offering the diagnostic criteria used for diagnosis (American Psychiatric Association, 2013).

Like other neuropsychiatric disorders, ...
... ADHD presents a spectrum ...
... of behavioral alterations ...
... with motor hyperactivity features, ...
... impulsivity, ...
... and/or inattention; ...
... offering the diagnostic criteria used ...
... for diagnosis ...
... (American Psychiatric Association, 2013).

S2 [020] So far, the most effective pharmacotherapy for the disorder comprises long-term treatments with stimulant drugs, such as amphetamine (AMPH) and methylphenidate.

So far, ...
... the most effective pharmacotherapy ...
... for the disorder comprises long-term treatments ...
... with stimulant drugs, ...
... such as amphetamine ...
... (AMPH) ...
... and methylphenidate.

S2 [021] These drugs enhance Dopamine (DA) neurotransmission by altering Dopamine Transporter (DAT) normal function (Faraone et al., 2005; German et al., 2015; Hong and Amara, 2013).

These drugs enhance Dopamine ...
... (DA) ...
... neurotransmission ...
... by altering Dopamine Transporter ...
... (DAT) ...
... normal function ...
... (Faraone et al., 2005; ...
... German et al., 2015; ...
... Hong ...
... and Amara, 2013).

End of Sample Audit

This is a truncated Manuscript Microscope Sample Audit.

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