Parkinsonism

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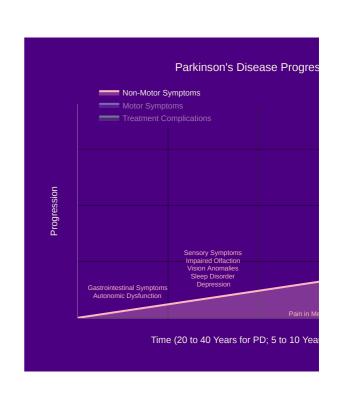
 ${\color{red} \boxtimes} - \text{Correspondence possible via } \underline{\text{GitHub Issues}} \text{ or email to Jane Roe <jane.roe@whatever.edu>}.$

Abstract

NOTE - this document is in draft currently. If I have the discipline, I will be making additions and edits for the next few months

Parkinsonism is a category of neurological diseases characterized by common mobility symptoms. Specific diseases include Parkinson's Disease (PD), Lewy Body Dementia (LBD), Progressive Supranuclear Palsy (PSP), and Multiple System Atrophy (MSA). These diseases have complex and heterogeneous pathologies that are not well understood. Common pathology attributes for idiopathic parkinsonism include misfolded proteins leading to toxic aggregates within the central nervous system (CNS), dysfunctional mitochondria resulting in impaired energy production and oxidative stress, chronic CNS inflammation, and dysfunctional cellular machinery that would otherwise correct misfolded protein conformation. The pathologies diverge based on which types of cells are affected, which protein aggregates, and which regions of the brain these changes occur.





Exosomes

Exosomes are small extracellular vesicles that play a key role in cell-to-cell communication and waste removal by transporting molecular cargo such as proteins, RNA, and lipids. Research within the last decade has focused on their potential in targeted therapy delivery, disease biomarker discovery, immune system modulation, and strategies to block their uptake to mitigate pathological processes. [Citation Needed]

Regarding neurodegenerative diseases, exosomes are being studied as potential biomarkers for early diagnosis, particularly for disorders like Parkinson's Disease and Multiple System Atrophy. [Citation Needed] These diseases have long prodromal phases, during which symptoms may be subtle or non-motor in nature, delaying diagnosis until neurodegeneration is already advanced. Since current diagnostic methods rely heavily on clinical evaluations of motor dysfunction, the identification of exosome-based biomarkers could enable earlier, more precise detection. Importantly, clinically viable biomarkers must be detectable in peripheral fluids such as blood or saliva, allowing for non-invasive testing during routine healthcare visits. This could shift the diagnostic paradigm from symptom-based assessments to proactive screening, potentially enabling earlier interventions that slow disease progression.

This manuscript is a template (aka "rootstock") for Manubot, a tool for writing scholarly manuscripts. Use this template as a starting point for your manuscript.

The rest of this document is a full list of formatting elements/features supported by Manubot. Compare the input (.md files in the /content directory) to the output you see below.

Basic formatting

Bold text

Semi-bold text

Centered text

Right-aligned text

Italic text

Combined italics and bold

Strikethrough

- 1. Ordered list item
- 2. Ordered list item
 - a. Sub-item
 - b. Sub-item
 - i. Sub-sub-item
- 3. Ordered list item
 - a. Sub-item
- List item
- · List item
- List item

subscript: H₂O is a liquid

superscript: 2¹⁰ is 1024.

unicode superscripts⁰¹²³⁴⁵⁶⁷⁸⁹

unicode subscripts₀₁₂₃₄₅₆₇₈₉

A long paragraph of text. Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Putting each sentence on its own line has numerous benefits with regard to editing and version control.

Line break without starting a new paragraph by putting two spaces at end of line.

Document organization

Document section headings:

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6



Horizontal rule:

Heading 1's are recommended to be reserved for the title of the manuscript.

Heading 2's are recommended for broad sections such as Abstract, Methods, Conclusion, etc.

Heading 3's and Heading 4's are recommended for sub-sections.

Links

Bare URL link: https://manubot.org

Long link with lots of words and stuff and junk and bleep and blah and stuff and other stuff and more stuff yeah

Link with text

Link with hover text

Link by reference

Citations

Citation by DOI [1].

Citation by PubMed Central ID [2].

Citation by PubMed ID [3].

Citation by Wikidata ID [4].

Citation by ISBN [5].

Citation by URL [6].

Citation by alias [7].

Multiple citations can be put inside the same set of brackets [1,5,7]. Manubot plugins provide easier, more convenient visualization of and navigation between citations [2,3,7,8].

Citation tags (i.e. aliases) can be defined in their own paragraphs using Markdown's reference link syntax:

Referencing figures, tables, equations

Figure 1

Figure 2

Figure 3

Figure 4

Table 1

Equation 1

Equation 2

Quotes and code

Quoted text

Quoted block of text

Two roads diverged in a wood, and I—I took the one less traveled by, And that has made all the difference.

Code in the middle of normal text, aka inline $\operatorname{\mathsf{code}}$.

Code block with Python syntax highlighting:

Code block with no syntax highlighting:

```
Exporting HTML manuscript
Exporting DOCX manuscript
Exporting PDF manuscript
```

Figures



Figure 1: A square image at actual size and with a bottom caption. Loaded from the latest version of image on GitHub.



Figure 2: An image too wide to fit within page at full size. Loaded from a specific (hashed) version of the image on GitHub.



Figure 3: A tall image with a specified height. Loaded from a specific (hashed) version of the image on GitHub.



Figure 4: A vector .svg image loaded from GitHub. The parameter sanitize=true is necessary to properly load SVGs hosted via GitHub URLs. White background specified to serve as a backdrop for transparent sections of the image. Note that if you want to export to Word (.docx), you need to download the image and reference it locally (e.g. content/images/vector.svg) instead of using a URL.

Tables

Table 1: A table with a top caption and specified relative column widths.

Bowling Scores	Jane	John	Alice	Bob
Game 1	150	187	210	105
Game 2	98	202	197	102
Game 3	123	180	238	134

Table 2: A table too wide to fit within page.

	Digits 1-33	Digits 34-66	Digits 67-99	Ref.
pi	3.141592653589793238462643383 27950	288419716939937510582097494 459230	781640628620899862803482534 211706	piday.org
e	2.718281828459045235360287471 35266	249775724709369995957496696 762772	407663035354759457138217852 516642	nasa.gov

 Table 3: A table with merged cells using the attributes plugin.

	Colors	
Size	Text Color	Background Color
big	blue	orange
small	black	white

Equations

A LaTeX equation:

$$\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2} \tag{1}$$

An equation too long to fit within page:

$$x = a + b + c + d + e + f + g + h + i + j + k + l + m + n + o + p + q + r + s + t + u + v + w + x + y + z + 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9$$
(2)

Special

▲ WARNING The following features are only supported and intended for .html and .pdf exports. Journals are not likely to support them, and they may not display correctly when converted to other formats such as .docx .

LINK STYLED AS A BUTTON

Adding arbitrary HTML attributes to an element using Pandoc's attribute syntax:

Manubot Manubot Manubot Manubot Manubot. Manubot Manubot Manubot Manubot. Manubot Manubot Manubot. Manubot Manubot. Manubot.

Adding arbitrary HTML attributes to an element with the Manubot attributes plugin (more flexible than Pandoc's method in terms of which elements you can add attributes to):

Manubot Manubo Manubot.

Available background colors for text, images, code, banners, etc:

white lightgrey grey darkgrey black lightred lightyellow lightgreen lightblue lightpurple red orange yellow green blue purple

Using the **Font Awesome** icon set:

√?★**‡**⊙…

*Light Grey Banner useful for general information - manubot.org

1 Blue Banner

useful for important information - manubot.org

○ Light Red Banner

useful for warnings - manubot.org

References

Sci-Hub provides access to nearly all scholarly literature 1.

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Brett K Beaulieu-Jones, Casey S Greene

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Bitcoin for the biological literature.

Douglas Heaven

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Open collaborative writing with Manubot 6.

Daniel S Himmelstein, Vincent Rubinetti, David R Slochower, Dongbo Hu, Venkat S Malladi, Casey S Greene, Anthony Gitter Manubot (2020-05-25) https://greenelab.github.io/meta-review/

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Journal of The Royal Society Interface (2018-04) https://doi.org/gddkhn

DOI: <u>10.1098/rsif.2017.0387</u> · PMID: <u>29618526</u> · PMCID: <u>PMC5938574</u>

Open collaborative writing with Manubot

Daniel S Himmelstein, Vincent Rubinetti, David R Slochower, Dongbo Hu, Venkat S Malladi, Casey S Greene, Anthony Gitter

PLOS Computational Biology (2019-06-24) https://doi.org/c7np

DOI: <u>10.1371/journal.pcbi.1007128</u> · PMID: <u>31233491</u> · PMCID: <u>PMC6611653</u>