Review of: "Critical Review on Carbon Nanomaterial Based Electrochemical Sensing of Dopamine the Vital Neurotransmitter"

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Potential competing interests: No potential competing interests to declare.

The introduction does well in establishing the importance of dopamine as a biomarker for nervous system disorders, tying it effectively to the rise in such disorders across all age groups. However, a brief mention of the specific disorders associated with dopamine dysregulation (e.g., Parkinson’s disease, schizophrenia) could make the text more informative and contextually richer for readers who may not be familiar with the link.

The section on electrochemical sensing as a promising avenue is well-placed but could benefit from mentioning a few key advancements that set electrochemical sensing apart from other methods. For instance, why is electrochemical sensing particularly advantageous for dopamine detection? Key factors, such as the low detection limits, the potential for miniaturization, and real-time analysis, would add depth.

The mention of a "notable gap in their application for clinical studies" is crucial, yet this point could be expanded.

Overall, the draft presents a well-structured review with a logical flow. With the addition of more specific details and examples, it would provide a richer and more impactful overview of the current state and potential future of dopamine diagnostics.