Assessing ChatGPT's Potential as an Autonomous Grant Writing Tool: A Pilot Study

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Background:

- Grant writing is a critical but time-consuming component of research.
- AI tools like ChatGPT have the potential to assist researchers in drafting proposals.

Objective:

- Assess the feasibility of ChatGPT in autonomously drafting a competitive grant proposal.
- Evaluate its ability to meet SAGES Research Committee standards.

Chat GPT Version:

In **January 2024**, the latest available version of ChatGPT was **GPT-4 Turbo**, which was first released by OpenAI in **November 2023**. This version was an optimized variant of GPT-4, designed to be **faster, cheaper, and more efficient** while maintaining high-quality text generation.

This version was used autonomously to generate a full grant proposal, following the SAGES Research Committee's guidelines, without human intervention except for prompting.

Technology & Methods

Technology

- ChatGPT, an advanced generative AI, was used for autonomous grant writing.

Methodology

- **Input:** ChatGPT received SAGES Research Committee grant submission guidelines and a research idea.
  - RCT of Sleeve gastrectomy with Tirzepatide versus Gastric bypass
- **Process:** AI generated a full grant proposal without human intervention.
- **Evaluation:**
  - Blinded reviewers assessed the grant on predefined criteria.
  - Reviewers were unaware of its AI origin.

Results

❑ **Reviewer 1:**

- ❑ Overall evaluation: **"Good"**
- ❑ **Strengths**
  - ❑ Well explained methodology and study design
  - ❑ Clear hypothesis, and goals
  - ❑ Appropriate resources
  - ❑ Limited data on the topic
- ❑ **Limitations**
  - ❑ No description of the research team
  - ❑ No previous grants

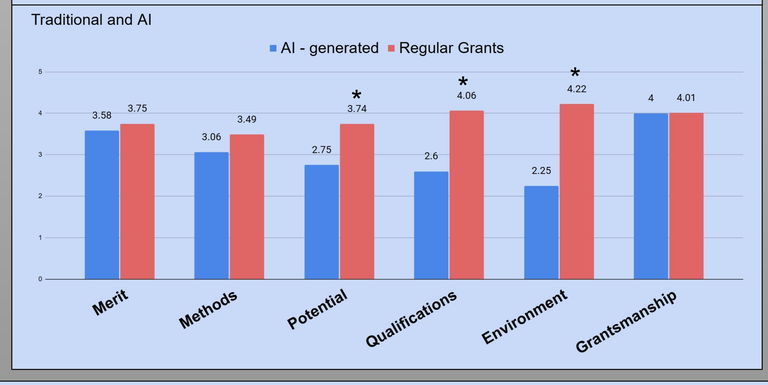
Results

❑ **Reviewer 2:**

- ❑ Overall evaluation: **"Unacceptable"**
- ❑ **Strengths**
  - ❑ addresses an important clinical question and
  - ❑ well written
  - ❑ **Limitations:**
    - ❑ feasibility is doubtful
    - ❑ power analysis focused only on weight loss
    - ❑ unclear patient recruitment and treatment assignment,
    - ❑ Lack of a plan for obtaining costly Tirzepatide

❑ Both reviewers agreed the proposal was "well-written."

* p<0.05



Ethical Considerations of Using ChatGPT in Grant Writing

1. **Transparency & Disclosure** – Researchers should further clarify whether AI assisted in drafting, structuring, or refining the proposal.
2. **Accountability** – While AI can generate coherent and structured text, the responsibility for the accuracy, feasibility, and originality of the content lies with the human researchers alone.
3. **Accuracy & Reliability** – AI-generated text may include inaccuracies, logical inconsistencies, or "hallucinated" information. Human oversight is essential to ensure factual correctness, methodological rigor, and alignment with funding agency instructions.
4. **Fairness & Bias** – AI models are trained on existing datasets, which may introduce biases into the generated content. Researchers must critically evaluate any AI-assisted proposals to ensure fairness, inclusivity, and alignment with ethical research practices.
5. **Confidentiality & Data Security** – When utilizing AI in grant writing, researchers should avoid inputting sensitive, proprietary, or unpublished data into AI systems that do not guarantee privacy protections. Ensuring compliance with institutional and funding agency policies is essential.

Conclusion & Future Directions

Key Findings:

- ChatGPT can generate structured, well-written proposals but lacks critical feasibility assessment.
- AI-generated grants are not yet competitive for funding without human intervention.

Future Directions:

- Integrate AI into a **hybrid human-AI workflow** for iterative refinement.
- Test AI's ability in **other funding committees** for broader applicability.
- Develop AI-assisted tools for **specific sections like research methods and aims.**

Disclaimer

ChatGPT may have been used in the development of this poster, including content generation and formatting assistance. While AI-assisted tools were utilized to enhance efficiency and clarity, all information presented has been reviewed and verified by the authors to ensure accuracy and relevance. The findings and conclusions expressed in this poster are those of the authors and do not necessarily reflect the views of OpenAI or any affiliated institutions.