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Funding Brains, Not Bytes: Keeping Seed Grants Focused on Investigators

Sohail Rao, MD, MA, DPhil[1]

[1]INNOVACORE™ Center for Research & Biotechnology, 6918 Camp Bullis Road, San Antonio, TX 78256.

[1]Corresponding Author Email: srao@innovacore.net

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At a recent internal meeting for a new seed-funding research program in an extensive health network, I encountered a familiar argument: applicants should be allowed to use artificial intelligence (AI) to draft proposals because "it cannot be policed," and that most of the "applicants will be neophytes." These claims appear pragmatic on the surface, but they overlook the purpose of seed funding. ***Seed grants are designed to identify promising investigators, provide sufficient resources to generate preliminary data, and position them to secure significant external awards.*** They are not charity; they are capacity-building and pipeline strategy. In that light, the real question is not prohibition versus permissiveness, but accountability (ICMJE, 2024; COPE, 2023).

When institutions fund pilots, they are investing in people who must ultimately survive peer review. The strongest seed applications reveal capacities that live in the investigator: framing a focused, fundable question; outlining a feasible approach with regulatory and logistical realism; anticipating critiques and responding to them; planning for near-term preliminary data; and charting a believable path to an R-type, foundation, or industry award. Suppose a flawlessly written proposal collapses the moment the principal investigator must explain or defend the aims without reading from the page. In that case, the program has discovered a fluent prompt engineer, not a future externally fundable PI. ***Seed programs are evaluated downstream based on conversion; internal dollars are considered successful only if they "turn into" extramural dollars within 12–24 months*** (NCATS/CTSA Program, 2024).

Some of us argue that seed funds build capacity, so let novices use AI. Seed mechanisms are expressly designed to develop investigators, often first-time applicants who lack grant-writing experience, mentoring depth, or access to editorial support. In this context, prohibiting AI can entrench inequities: senior researchers already benefit from lab templates, grant cores, and senior co-authors who refine their prose, while newcomers, predominantly non-native English writers, face a steeper barrier to clarity and adherence to genre conventions. Responsible AI assistance can narrow this gap by tightening language, clarifying structure, and offering standard phrasing, much like a junior editor available to everyone (Liang et al., 2023). Major ethics bodies do not ban assisted writing; they emphasize disclosure and author accountability, which aligns with the developmental intent of seed programs (ICMJE, 2024; COPE, 2023). If the goal is capacity-building, then teaching novices to use AI as an assistant provided applicants own the ideas, disclose assistance, verify facts, and can defend the plan live (ICMJE, 2024; COPE, 2023).

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The workable boundary, therefore, is not "AI: yes or no," but AI as assistant versus AI as author. Assistance that tightens language, compresses text, or suggests alternative phrasings, followed by human verification, is analogous to longstanding editorial support and can reduce inequities for early-stage investigators and for scholars writing in a non-native language (COPE, 2023; ICMJE, 2024). Outsourcing authorship of aims, significance, innovation, feasibility claims, or preliminary data narratives creates an illusion of competence, invites factual errors or phantasms, and undermines the very capability seed funding is meant to cultivate (ICMJE, 2024).

Governance should not rely on AI-detection tools. Detectors are bias-prone and easily bypassed, with documented false positives, particularly for non-native English writers that institutions have had to unwind. Instead, seed committees should restore accountability where it belongs (Liang et al., 2023). First, require a concise AI-use declaration stating whether AI was used, where, for what purpose, and confirming independent verification of any factual claims. Second, add a PI attestation of intellectual ownership, affirming that the investigator originated and can personally defend the aims, rationale, methods, feasibility, and next-funding strategy (ICMJE, 2024; COPE, 2023). Third, conduct a brief live Q&A session for finalists, focusing on key elements of the proposal. ***AI can draft paragraphs; it cannot sit in the room and reason in the investigator's voice*** *(NIH, 2023).*

For translational programs, the stakes are higher still. AI is now utilized in diagnostics, pathology, and clinical decision support for image triage, report drafting, and workflow management, making familiarity with these tools essential. However, translational research is tightly regulated; investigators must navigate IRB/ethics, CLIA/CAP, payer scrutiny for medical necessity, data provenance, and post-award reporting requirements. Those are cognitive tasks that cannot be faked for long. Suppose AI generates core scientific claims in seed proposals. In such cases, institutions risk funding projects that appear promising but fail upon interaction with biospecimens, protected health information, or during the human subjects review process, wasting seed money and exposing themselves to compliance risks (ICMJE, 2024; NIH, 2023).

This is not technophobia. It is disciplined transparency that strikes a balance between realism and rigor. AI may assist with presentation, clarity, and structure; however, it should not originate or fabricate core scientific claims, feasibility assertions, or next-step strategies. Applicants should disclose use, attest to intellectual ownership, and defend plans live. That stance acknowledges reality: AI exists and will be used, while protecting what seed programs are supposed to cultivate, investigators who can think critically, adapt, and secure funding outside of traditional sources (ICMJE, 2024; COPE, 2023; NIH, 2023).

Put bluntly, seed funding should not reward whoever can extract the most persuasive paragraph from a chatbot; it should reward whoever can turn $50,000 of internal trust into a credible $500,000-plus award. That is not gatekeeping. That is stewardship (NCATS/CTSA Program, 2024).

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