



GETTING STARTED

- Introduction
- Twitter/X [↗](#)

SCI-HIVE

- Autonomous Research Discovery
- Knowledge Graph
- Generation System
- Validation System
- Roadmap

PROJECTS

- HypGen
- PsyBEE

ECOSYSTEM

- Tokenomics
- Open-Source Contribution
- Brand Toolkit

METHODOLOGIES

[V0: Hypothesis Generation \(Ghafarollahi & Buehler, 2024\)](#)

[V0: Building KG \(Buehler, 2024\)](#)

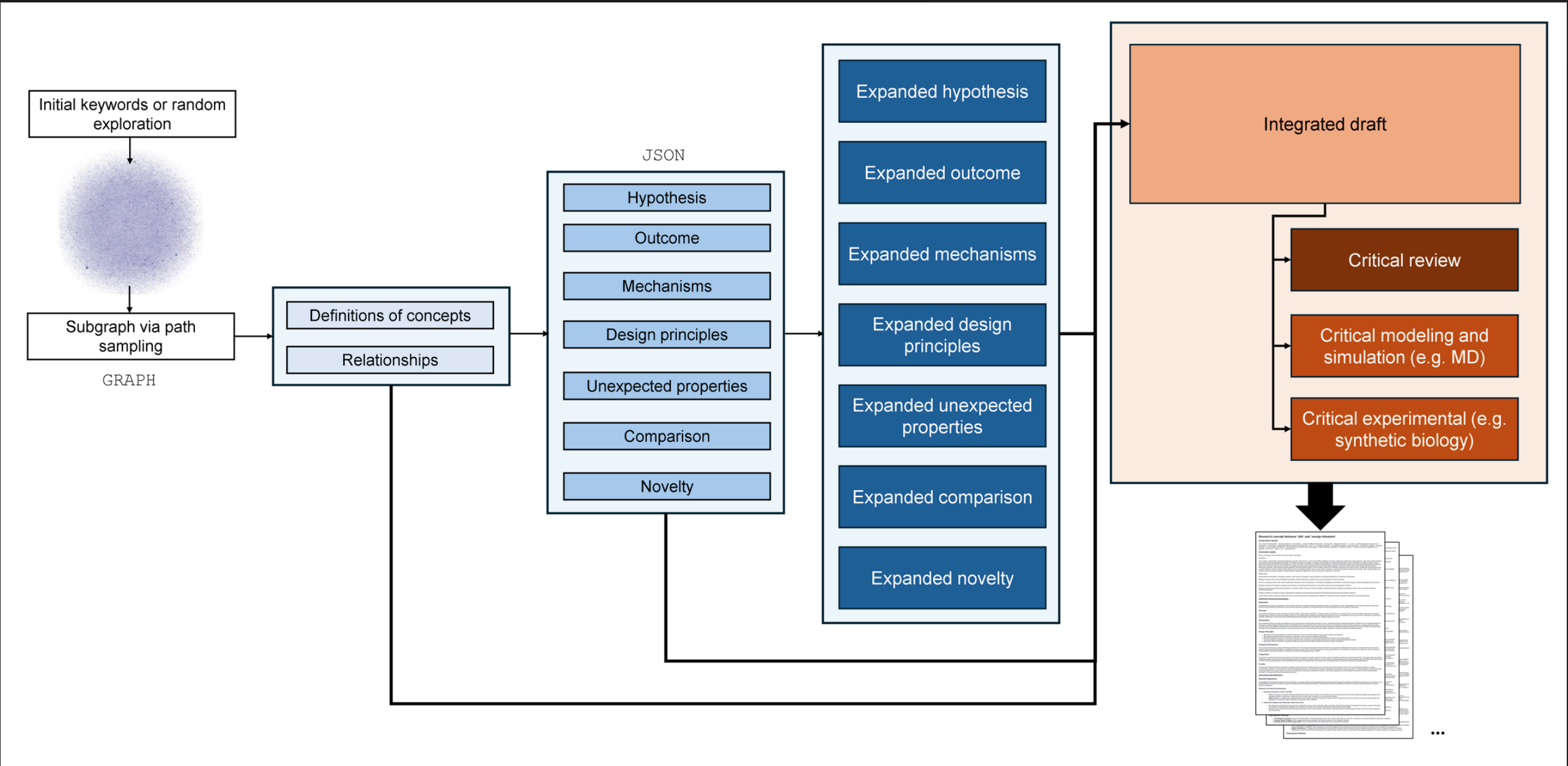
METHODOLOGIES

V0: Hypothesis Generation (Ghafarollahi & Buehler, 2024)

tl;dr

The baseline methodology for hypothesis generation is based on the approach introduced by Ghafarollahi & Buehler (2024). The system uses a multi-agent AI framework to generate and evaluate scientific hypotheses through five main phases:

- Knowledge Mapping:** Generates conceptual pathways between scientific concepts in a knowledge graph
- Concept Analysis:** Defines and contextualizes the relationships between identified concepts
- Hypothesis Generation:** Synthesizes a comprehensive research proposal with seven key aspects
- Proposal Refinement:** Critically expands each aspect with scientific depth and quantitative details
- Evaluation:** Assesses the proposal's strengths, weaknesses, and novelty against existing literature



Research Proposal Generation Diagram. Source: Ghafarollahi & Buehler (2024)

References

Ghafarollahi, A., & Buehler, M. J. (2024). *SciAgents: Automating scientific discovery through multi-agent intelligent graph reasoning* (No. arXiv:2409.05556). arXiv. <https://doi.org/10.48550/arXiv.2409.05556> ↗