MUT x MUG - One-Page Integrated Research Protocol

MOUSSAIF Conscious AGI Research Program. MUT organizes what the project claims and how theories relate; MUG governs where capabilities live and how they become operational; M-HKOS turns the corpus into an active cognitive operating layer; MOUSSAIXT is the principal runtime for implementation and testing.

1. Research Question Define one capability gap, failure mode, or consciousness/agency hypothesis. **Output:** Question + success condition + falsifier	**7. Agentic Compilation** Compile knowledge into HyperSkills, HyperAbilities, HyperLoops, tool contracts, routing policies, and memory rules. **Output:** Capability package
2. MUT Theory Resolution Locate relevant theory nodes, mechanisms, dependencies, competing explanations, and evidence status. **Output:** Minimal Theory Graph	**8. MOUSSAIXT Execution** Run governed planning -> retrieval -> tool use -> verification -> world-effect -> readback -> memory writeback. **Output:** Complete replayable trace
3. Difference Extraction Apply MCD / QMCD to isolate the few differences that materially change the result. **Output:** Ranked governing differences	**9. Consciousness Probe** When relevant, test self-model, meta-governance, conflict awareness, continuity, source-of-judgment tracking, reverse capture, and self-correction. **Output:** Functional consciousness trace
4. Governance Apply MCAI / HAKIM-MCD / Governance-Space / Courts to expose conflicts, assumptions, unsafe optimization, and weak evidence. **Output:** Governed decision object	**10. Evidence Court** Compare baseline vs mechanism using ablation, adversarial cases, retries, cost, latency, recovery, and transfer. **Output:** E0-E5 evidence record
5. MUG Placement Decision Place the capability in Context -> M-HKOS/HyperKB -> HyperSkill -> HyperAbility -> HyperLoop -> Adapter -> Weights. Default to the least irreversible layer. **Output:** Capability Placement Record	**11. Promotion / Demotion** Promote deeper only after repeated cross-task transfer; demote or remove mechanisms that fail ablation. **Output:** Updated MUG placement
6. Knowledge Compilation Convert theory into definitions, schemas, procedures, examples, counterexamples, failure cases, and validators. **Output:** Executable knowledge package	**12. Corpus Writeback** Update MUT relations, M-HKOS knowledge, failure datasets, metrics, unresolved questions, and version history. **Output:** New canonical corpus state

Core Operating Loop

Question -> MUT map -> MCD difference -> Governance Court -> MUG placement -> M-HKOS compilation -> HyperCapability -> MOUSSAIXT execution -> Evidence -> Writeback -> Revised theory

Non-Negotiable Research Rules

1. Theory != evidence. Every construct remains a hypothesis until operationally discriminative.	**2. Runtime success != AGI.** Capability claims require controlled comparison and transfer.
3. Conscious behavior != proven consciousness. Test functional computational properties, not metaphysical certainty.	**4. Externalize first.** Do not fine-tune what can remain inspectable in Context, M-HKOS, Skills, or Loops.
5. Every mechanism must survive ablation. If removal changes nothing, it is not yet validated.	**6. Every action requires readback.** Tool execution is not a world-effect until resulting state is independently observed.
7. Every failure becomes an asset. Failure must update memory, evaluation sets, theory relations, or governance rules.	**8. No silent theory collapse.** MUT preserves provenance, competing interpretations, revisions, and evidence level.

Canonical deliverable per research cycle: one theory graph + one capability package + one replay trace + one ablation result + one evidence-grade update + one corpus writeback.
Program objective: transform the MOUSSAIF corpus into a measurable, governed, self-correcting Agentic AGI research stack: MUT supplies theoretical coherence, MUG governs capability internalization, M-HKOS operationalizes knowledge, and MOUSSAIXT provides the experimental runtime.