Leveraging Generative AI for Accelerated Research and Discovery: An Interactive Workshop with Moremi Co-Researcher

Harnessing AI and Moremi Co-Researcher for Responsible, Efficient and High-Impact Research
Hosted by MinoHealth AI Labs and the African Research Universities Alliance (ARUA)

Date: Thursday, 5th November, 2026
Time: 11 AM GMT
Venue: Zoom (Virtual)
Duration: 2 hours
Registration link: https://luma.com/s9ohfwc0

Background and Rationale

MinoHealth AI Labs, in collaboration with, The African Research Universities Alliance (ARUA), is convening this interactive workshop to explore how generative and agentic AI can support African researchers across the research lifecycle.

The African Research Universities Alliance (ARUA) has established a strong collaborative research ecosystem centred on interdisciplinary research, capacity building and the development of African solutions to major scientific, societal and developmental challenges.

As research becomes increasingly data-intensive and interdisciplinary, AI offers opportunities to accelerate literature discovery, research design, scientific writing, data analysis and specialised computational research. At the same time, researchers must understand the limitations of AI, including hallucinations, bias, data privacy, reproducibility and the need for independent scientific validation.

This workshop introduces Moremi Co-Researcher as an AI-powered research co-researcher designed to support researchers across different stages of the research lifecycle, developed by MinoHealth AI Labs. The workshop will explore both the broader use of AI in research and the specialised capabilities of Moremi for scientific and biomedical investigation.

Moremi Co-Researcher

Moremi Co-Researcher is an agentic generative AI-powered scientific co-researcher designed to help researchers investigate questions, work with scientific information, develop and refine research outputs, and perform specialised computational analyses.

Unlike a conventional language model that primarily provides a textual response, Moremi is designed to support scientific problem-solving by reasoning about a research question, selecting relevant analytical approaches and using specialised computational tools where appropriate.

Its capabilities span multiple areas of research and can support specialized biological workflows involving areas such as:

- Research and Knowledge Discovery
    - searching for and synthesising scientific information;
    - supporting comprehensive literature research;
    - identifying relevant evidence and research gaps;
    - comparing findings across studies;
- Scientific Writing and Research Communication
    - review and critique written content;
    - identify inconsistencies, weaknesses and areas requiring clarification;
    - provide feedback on research methodology and presentation;
    - identify potentially suitable journals or publication venues;
    - support researchers in refining their work before submission.

- AI-Assisted Research
    - selecting appropriate AI-assisted approaches;
    - combining AI reasoning with specialised computational tools;
    - critically evaluating AI-generated outputs;

- Scientific and Biomedical Research
    - genomics and sequence analysis;
    - protein biology and structural biology;
    - small-molecule and therapeutic target investigation;
    - drug discovery and optimisation;
    - molecular property and ADMET evaluation;
    - biological data interpretation
    - multi-step scientific workflows.

Moremi therefore spans both the general research workflow and specialized scientific computation, allowing researchers to use AI for everyday research activities while also supporting advanced domain-specific investigations. The purpose is not to replace researchers, scientific expertise, laboratory validation. Rather, Moremi is intended to help scientists move more efficiently from:

Research Question → Knowledge Discovery → Hypothesis → Analysis → Interpretation → Scientific Communication → Validation

Proposed Opportunity

The workshop represents a collaborative initiative between ARUA and MinoHealth AI Labs to introduce researchers, faculty and students to the potential role of agentic AI and scientific intelligence in accelerating research. The workshop will demonstrate how Moremi can be applied to real research problems rather than presenting the system only as a general AI assistant.

The objective is to allow participants to understand:

1. Learn how AI can support researchers across the research lifecycle
2. Understand how to use AI responsibly and ethically
3. Learn how AI can act as a critical reviewer of research proposals, theses, manuscripts
4. Explore applications of AI in biomedical and life-science research.
5. Demonstrate how Moremi Co-Researcher can orchestrate specialised computational tools for advanced scientific and biological research
6. How Moremi can support interdisciplinary and collaborative research.

Potential Areas of Synergy with ARUA Research

1. **AI Across the Research Lifecycle with Moremi Co-Researcher and its Literature Review Feature**

   This module equips participants with practical, research-focused skills for effectively and responsibly integrating AI into their research workflows. It covers key areas including AI for responsible and ethical research, prompt engineering for researchers, AI-assisted scientific writing and research review, and comprehensive literature research using Moremi's dedicated Literature Review feature.

2. **AI for Biomedical Research**

   Health and Non-Communicable Diseases

   - therapeutic target prioritisation;
   - molecular interaction studies;
   - computational drug discovery;
   - analysis of candidate therapeutics.

   Infectious Diseases and Pandemic Preparedness

   - gene and protein characterisation;
   - antigen prioritisation;
   - vaccine-related computational analysis;

These applications are particularly relevant to ARUA's emerging research activities in infectious diseases, genomics, pandemic preparedness, infection, immunity and inflammation.

Genomics for Health

Moremi can potentially support researchers in moving from genomic data toward biological interpretation.

For example:

sequence data → identification and annotation → functional interpretation → protein consequences → biological hypotheses → prioritisation for validation

This could be particularly useful for researchers who have biological questions and data but require assistance navigating multiple specialised computational approaches.

3. **Advanced Computational Research with Moremi**
    - **Genomics and sequence Analysis**
    - **AMET profiling**
    - **Drug discovery**
      Molecular interactions

The workshop will explicitly address:

- hallucination and incorrect outputs;
- verification of AI outputs;
- reproducibility;
- appropriate use of AI in research;
- the role of domain expertise;
- the importance of wet-laboratory and real-world validation.

Expected Outcomes

Following the workshop, participants should have be able to:

- identify practical applications of AI across different stages of their research;
- critically evaluate AI-generated information rather than accepting outputs uncritically;
- use AI as a reviewer and research assistant when developing proposals, theses, manuscripts and other scientific documents;
- understand how agentic AI can coordinate specialised computational tools for complex scientific investigations;
- recognise the limitations of AI and the importance of human scientific judgement, independent verification and experimental validation

Conclusion

Through this collaboration, MinoHealth AI Labs and ARUA seek to explore how emerging scientific AI systems can help African researchers **move more efficiently from research questions and data to evidence, hypotheses and scientifically testable discoveries**.

The proposed workshop will not simply demonstrate an AI system. Its purpose will be to explore a more fundamental question:

How can African researchers use emerging scientific intelligence systems to reduce computational barriers, accelerate the investigation of complex research questions and increase their capacity to move from data and hypotheses toward scientifically testable discoveries?

The proposed engagement will provide ARUA researchers, faculty and students with an opportunity to directly evaluate where Moremi can provide meaningful value within their existing research programmes and to identify areas for future collaboration and pilot research.