



Wekemo Bioincloud 2026: An AI-enabled platform for standardized multi-omics data analyses

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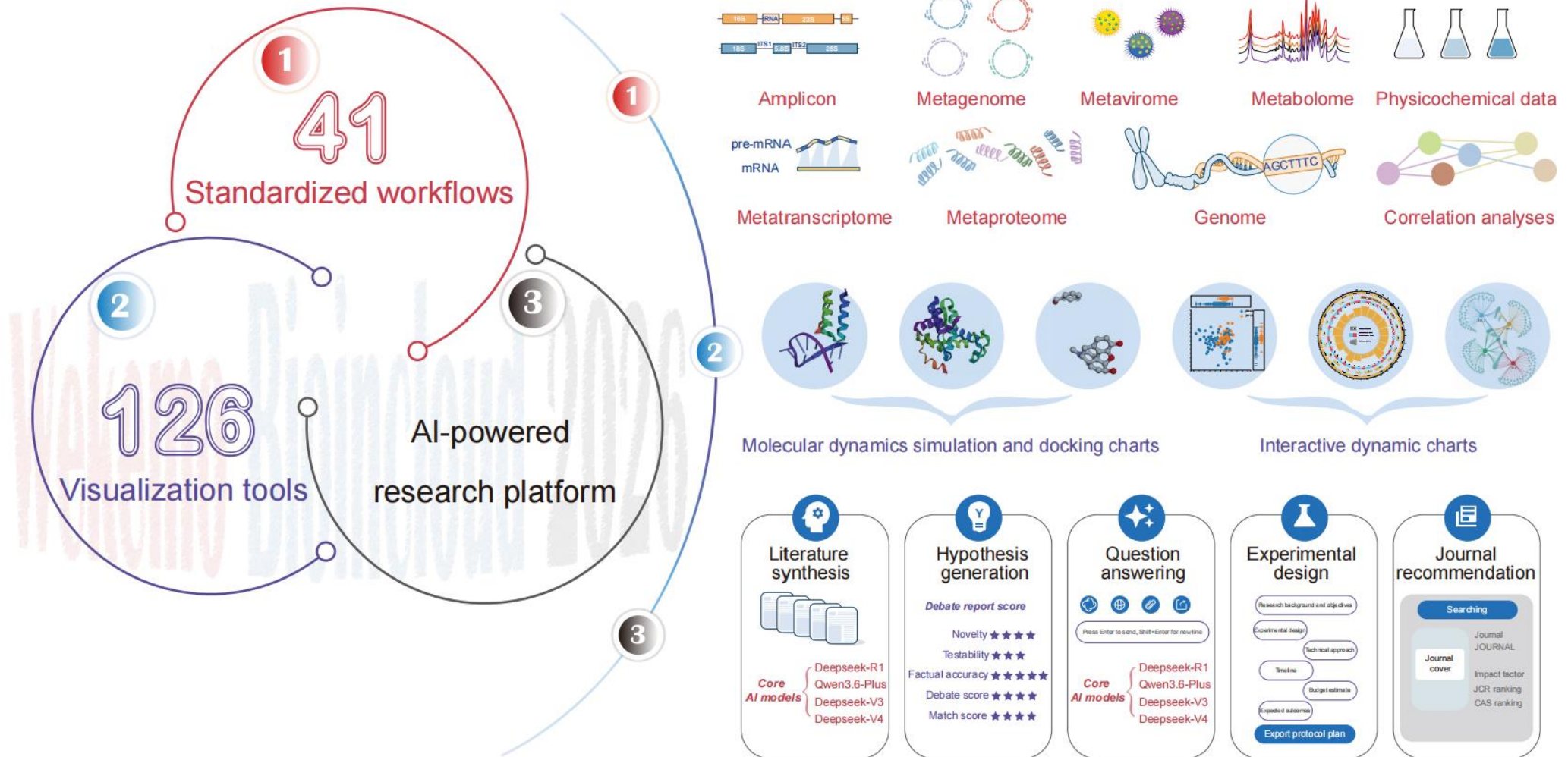
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Introduction

Wekemo Bioincloud 2026:

An AI-enabled platform for standardized multi-omics data analyses



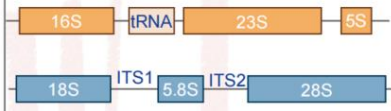


Core Power: 41 Standardized Workflows

Overview of 41 analysis workflows in Wekemo Bioincloud 2026

I| Amplicon data analyses (2)

- Amplicon sequencing workflow
- Amplicon sequencing workflow (third-generation)



II| Metagenomic analyses (3)

- Metagenome workflow (reference-based)
- Metagenome workflow (de novo)
- Metagenome workflow (binning)



III| Metaviromic analysis (1)

- Metavirome workflow



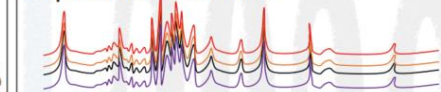
IV| Physicochemical analysis (1)

- Physicochemical properties workflow



V| Metabolomic analyses (4)

- Non-targeted metabolome workflow
- Targeted metabolome workflow (high-throughput)
- Targeted metabolome workflow
- Lipidomics Workflow



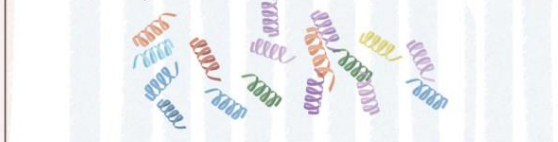
VI| Metatranscriptomic analyses (9)

- Metatranscriptome workflow
- miRNA transcriptome workflow ★
- lncRNA transcriptome workflow
- Eukaryotic transcriptome workflow (reference-based)
- Eukaryotic transcriptome workflow
- Eukaryotic transcriptome workflow 2.0 ★
- 10X single-cell transcriptome workflow
- Whole transcriptome workflow ★
- Prokaryotic transcriptome workflow (reference-based) ★



VII| Metaproteomic analyses (6)

- Metaproteome workflow (TMT-based)
- Metaproteome workflow (TMT-based) v2.0 ★
- Metaproteome workflow (label-free)
- Astral DIA proteomics workflow ★
- Astral DIA proteomics workflow (reference-free) ★
- Phosphorylation proteomics workflow ★



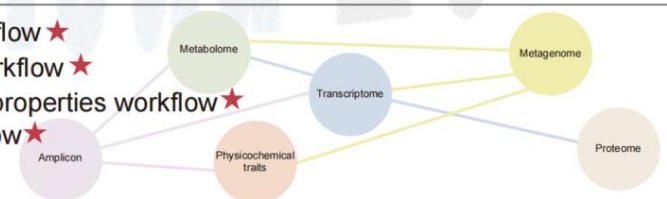
VIII| Genomic analyses (7)

- Bacterial genome workflow
- Bacterial genome workflow (PacBio+Illumina)
- Bacterial complete genome workflow (complete circular test) ★
- Fungal genome framework workflow
- Fungal genome workflow (PacBio+Illumina)
- Plant and animal genome resequencing and variant detection workflow ★
- Human-exome sequencing workflow ★



IX| Correlation analyses (8)

- Amplicon-Metabolome workflow ★
- Amplicon-Transcriptome workflow ★
- Amplicon-Physicochemical properties workflow ★
- Transcriptome-Metabolome workflow ★
- Metagenome-Metabolome workflow ★
- Metagenome-Transcriptome workflow ★
- Metagenome-Physicochemical properties workflow ★
- Transcriptome-Proteome workflow ★



★ Workflows newly introduced in Wekemo Bioincloud 2026

Overview of 41 standardized multi-omics workflows organized into nine analytical categories.



Core Power: 126 Enhanced Visualization Tools

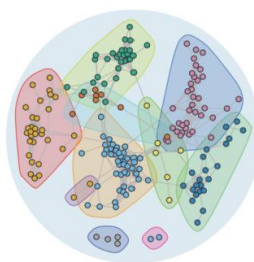
Enhanced visualization tools in Wekemo Bioincloud 2026



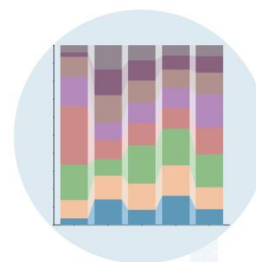
Mantel test-based correlation heatmap



Circular heatmap



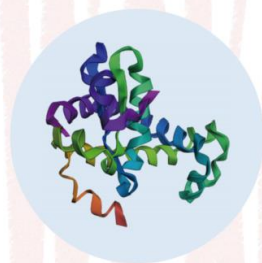
Co-occurrence network analysis



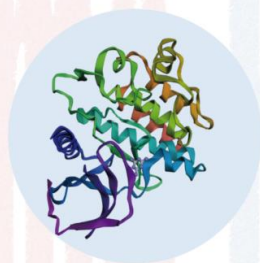
Connected stacked chart



Dynamic species abundance sankey chart



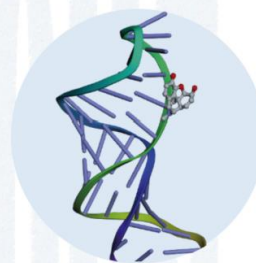
Protein-protein docking



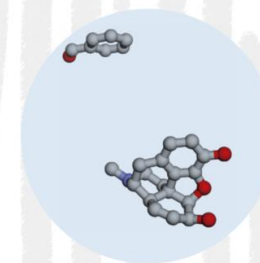
Protein-small molecule docking



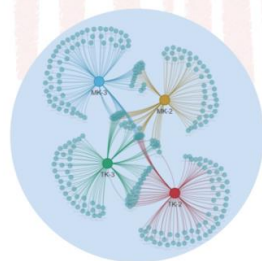
Protein-nucleic acid docking



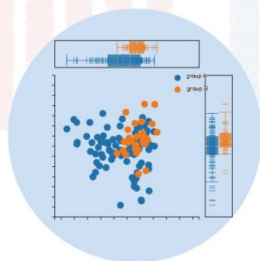
Nucleic acid-small molecule docking



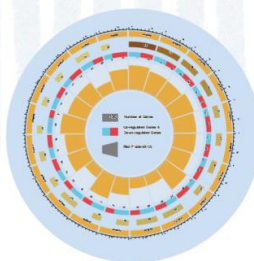
Small molecule-small molecule docking



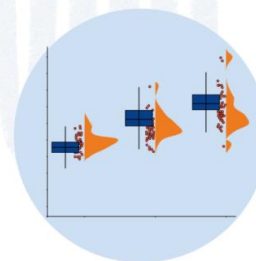
Network venn chart



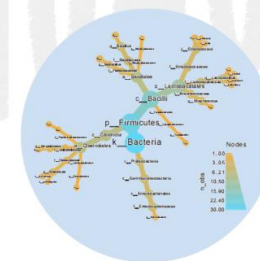
Scatter chart with boxplots



Gene enrichment circle chart



Raincloud plot



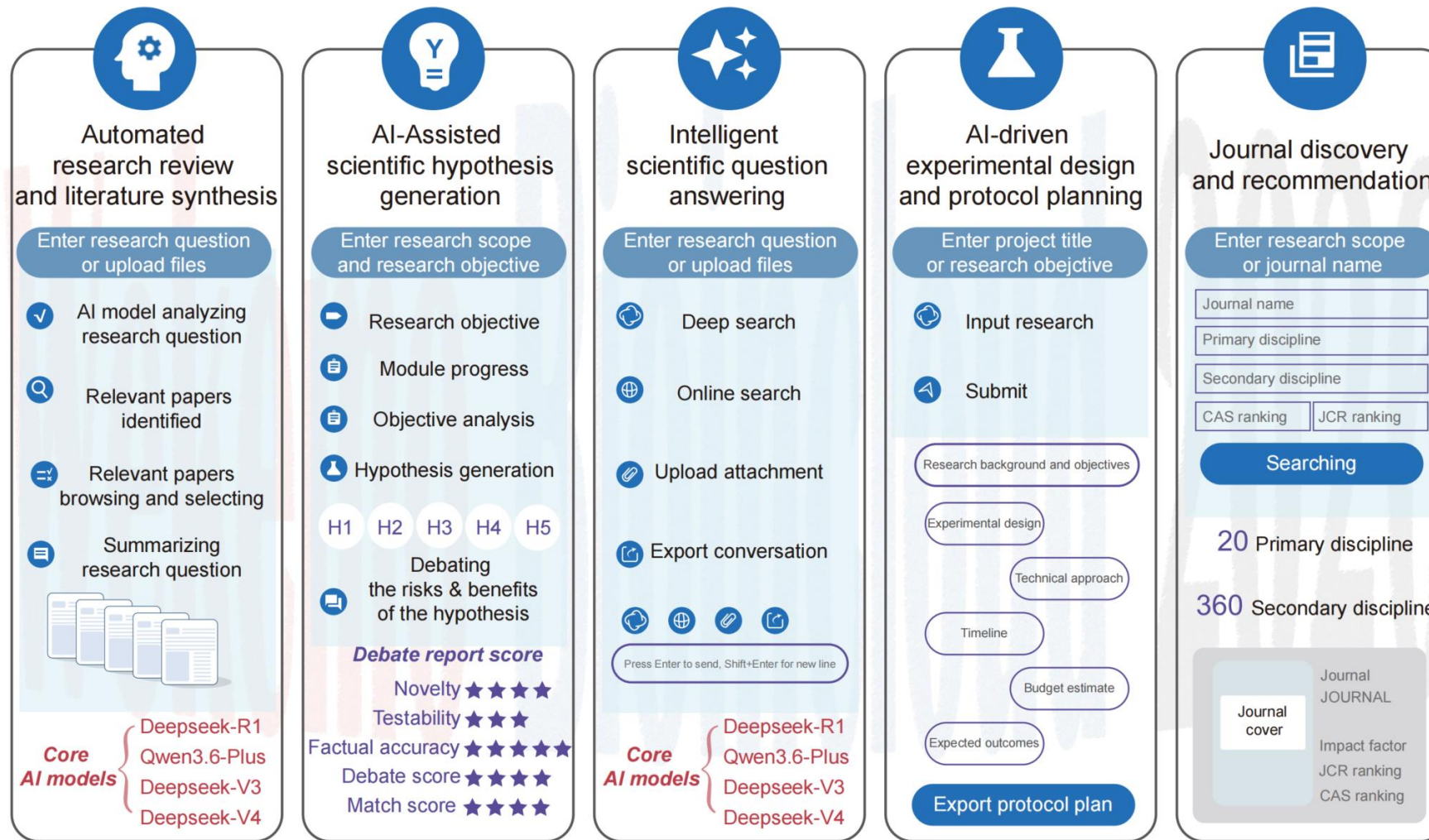
Taxonomic heat tree

A comprehensive collection of 126 visualization tools supporting statistical analysis, multi-omics integration, molecular docking, and interactive data exploration.



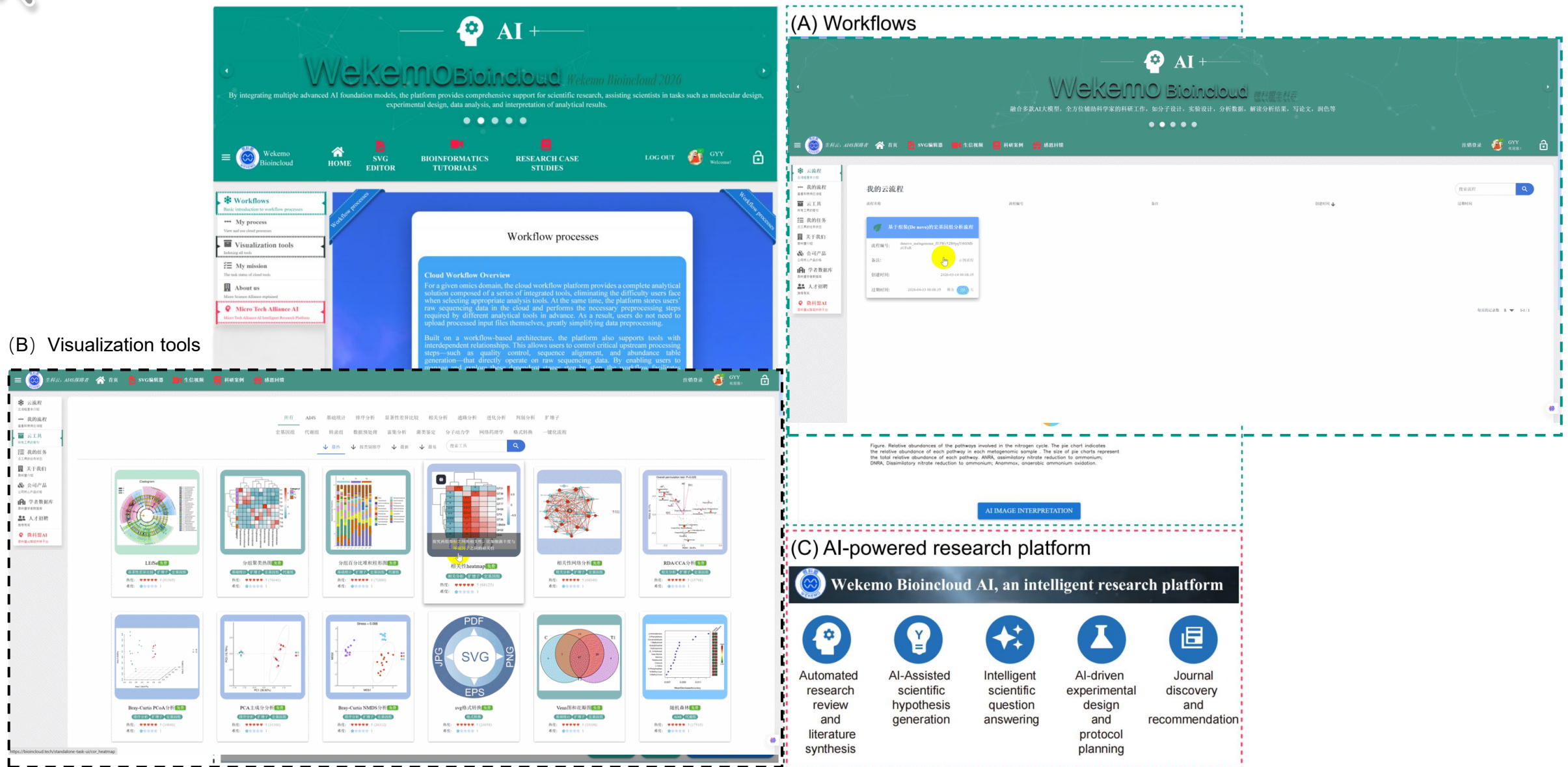
Core Power: AI-powered Research Platform

New AI-powered research platform in Wekemo Bioincloud 2026



Five core AI capabilities powering the research platform: Synthesis, Hypothesis Generation, Q&A, Experimental Design, and Journal Recommendation.

AI-assisted interpretation for meta-omics data



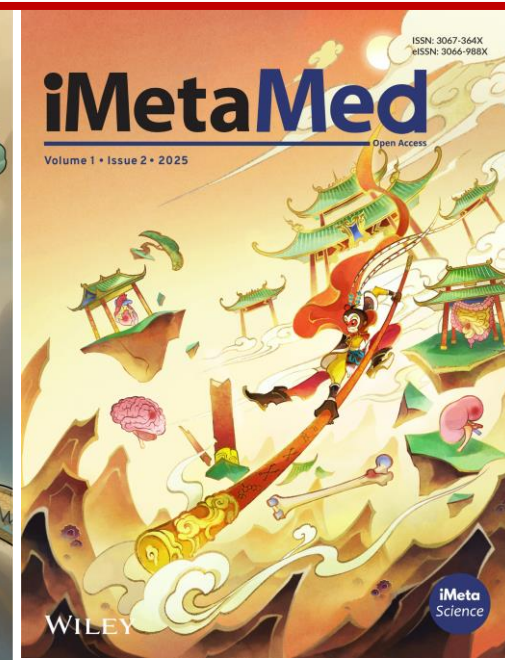
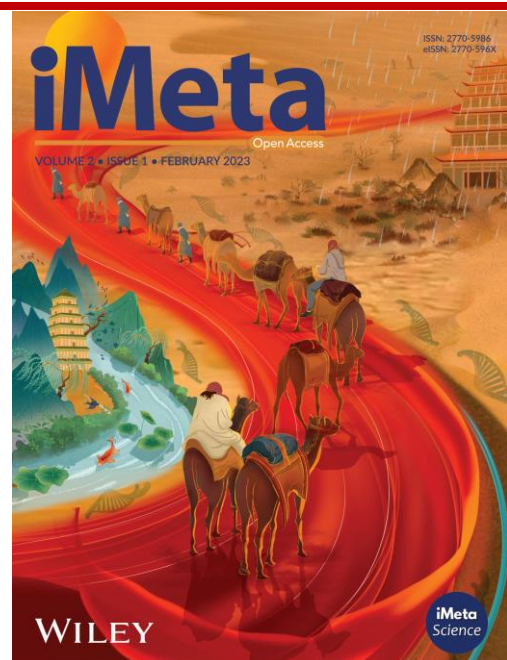
Representative examples of AI-assisted interpretation across workflows, visualization tools, and research support modules.



Summary

- ❑ Providing 41 standardized workflows across nine analytical categories, including a newly introduced correlation analysis module for cross-omics integration.
- ❑ Expanding visualization capabilities to 126 tools with AI-assisted parameter guidance and automated figure interpretation for improved data exploration and result interpretation.
- ❑ Supporting literature synthesis, hypothesis generation, scientific question answering, experimental design, and journal recommendation throughout the research workflow.
- ❑ Website: <https://www.bioincloud.tech/>

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