



MASH-Ocean 1.0: 基于海洋宏基因组数据研究微生物多样性、功能和生物地理学的交互式平台

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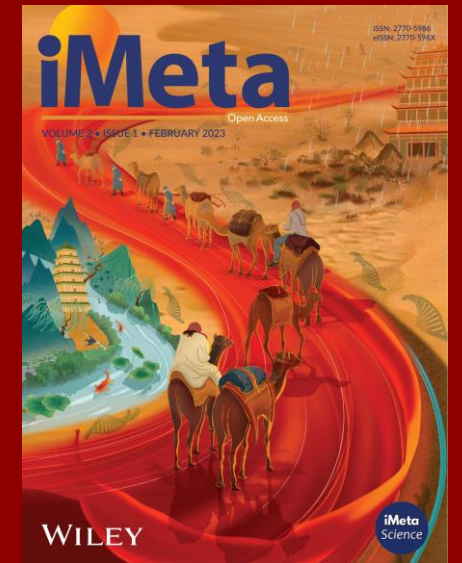
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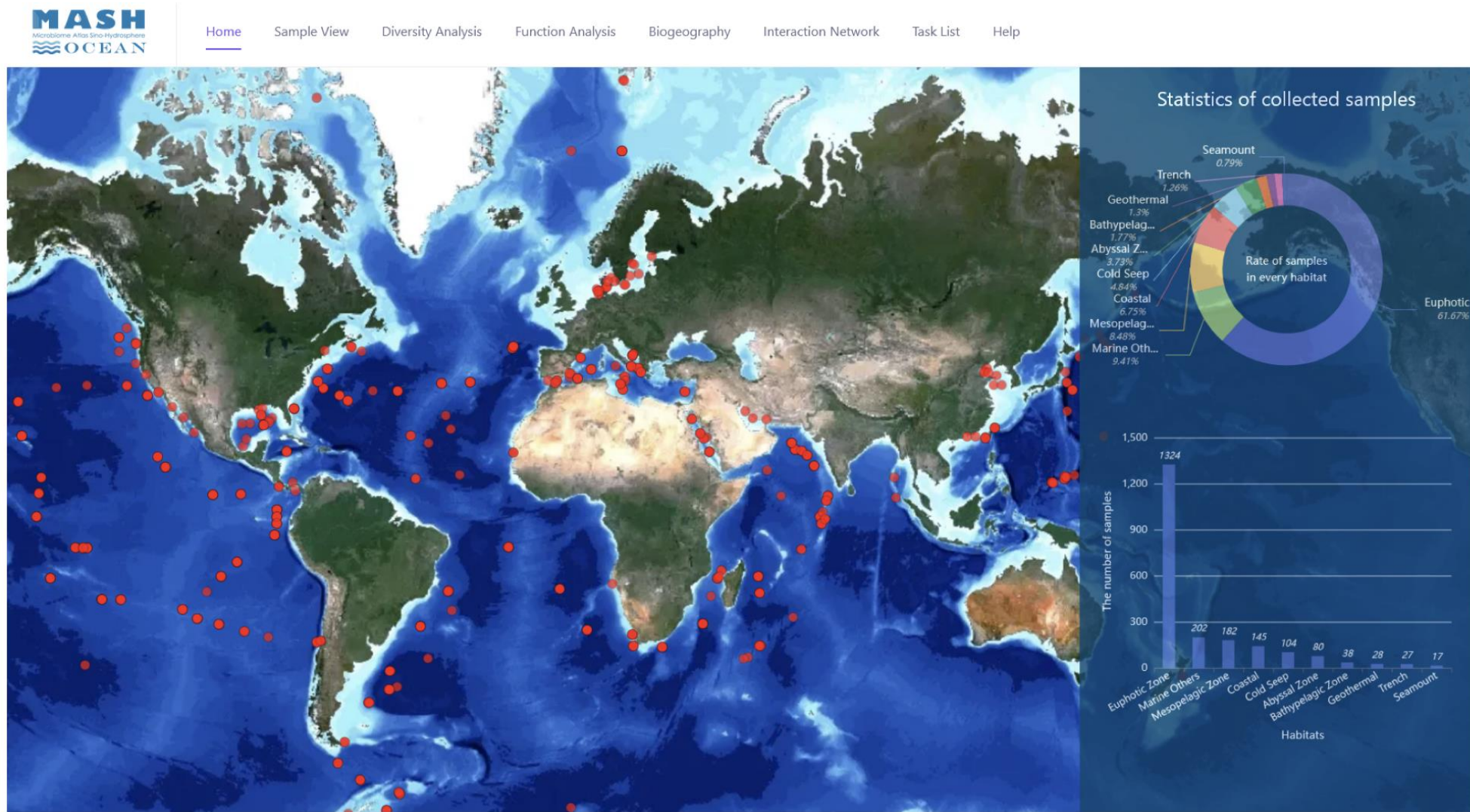


MASH-Ocean 1.0: Interactive platform for investigating microbial diversity, function, and biogeography with marine metagenomic data. *iMeta* 3: e201. <https://doi.org/10.1002/imt2.201>



简介

本研究通过整合全球海洋宏基因组数据和统一数据处理流程，构建了一个系统化和量化的分析平台，**Microbiome Atlas/Sino-Hydrosphere for Ocean Ecosystems (MASH-Ocean: <https://www.biosino.org/mash-ocean>)**





MASH平台概述

MASH-Ocean 1.0目前包含**2,147**个宏基因组样本，并有五个分析模块：样本视图、多样性、功能、生物地理学和互作网络。该平台能够为微生物学、环境科学和生物地球化学的研究者提供方便且稳定的支持。

MASH
Microbiome Atlas in the Hydrosphere
OCEAN

Home Sample View Diversity Analysis Function Analysis Biogeography Interaction Network Task List Help

Description

Overview Display Map

Show 20 Entries

Run ID	Project ID	Sample ID	Habitat Source	Env Zone	Env Medium	Fractionation	Location	Longitude	Latitude
SRR7648270	PRJNA482655	SAMN09765707	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648273	PRJNA482655	SAMN09765713	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648274	PRJNA482655	SAMN09765706	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648284	PRJNA482655	SAMN09765689	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648285	PRJNA482655	SAMN09765688	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648286	PRJNA482655	SAMN09765691	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648287	PRJNA482655	SAMN09765690	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648288	PRJNA482655	SAMN09765685	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648289	PRJNA482655	SAMN09765684	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
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SRR7648291	PRJNA482655	SAMN09765686	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648292	PRJNA482655	SAMN09765711	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648293	PRJNA482655	SAMN09765710	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75
SRR7648294	PRJNA482655	SAMN09765709	Abyssal Zone	Abyssal Zone	Seawater	Meta	Pacific Ocean: North Pacific Gyre; Station ALOHA	-158	22.75

Showing 1 to 20 of 2,147 entries

Previous 1 2 3 4 5 ... 108 Next

* The meta information were standardized.

Filter

- Search ID
- Habitat Source
e.g. Abyssal Zone
- Env Zone
e.g. Abyssal Zone
- Env Medium
e.g. Seawater
- Fractionation
e.g. Meta
- Location
e.g. Pacific Ocean: North Pacific Gyre; Station A...
- Longitude
-180.00 ~ 180.00
- Latitude
-90.00 ~ 90.00
- Depth (m)
0.0 ~ 10899.0

Search



云工具



Diversity Analysis

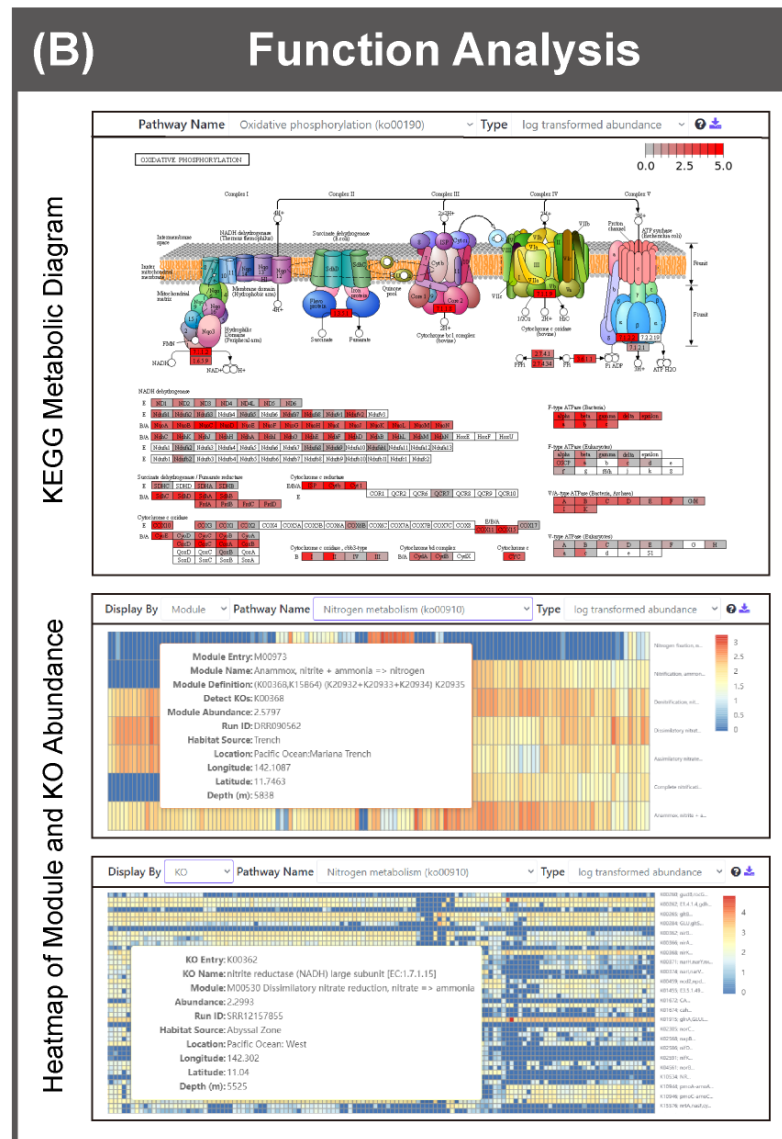
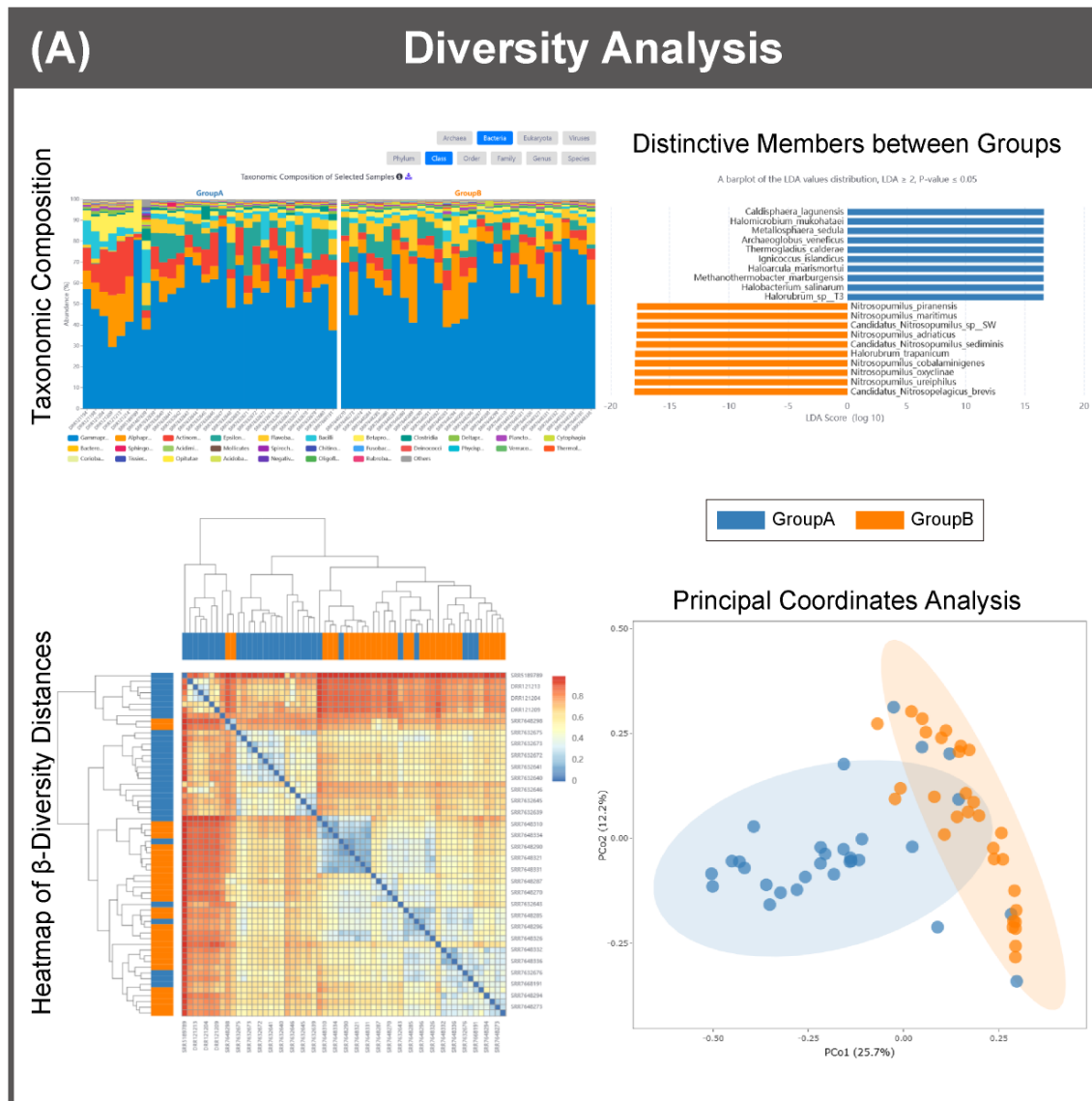
Interaction Network

Biogeography

Function Analysis



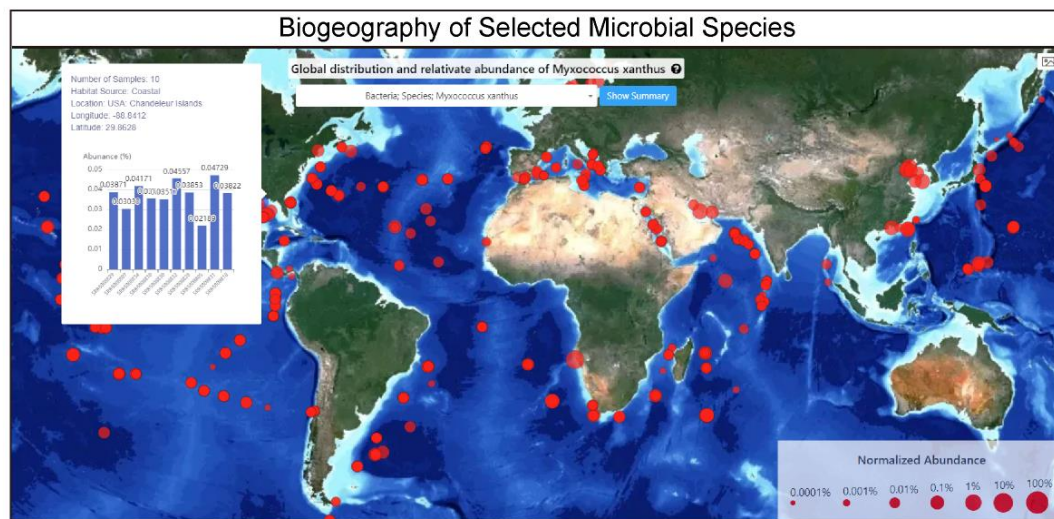
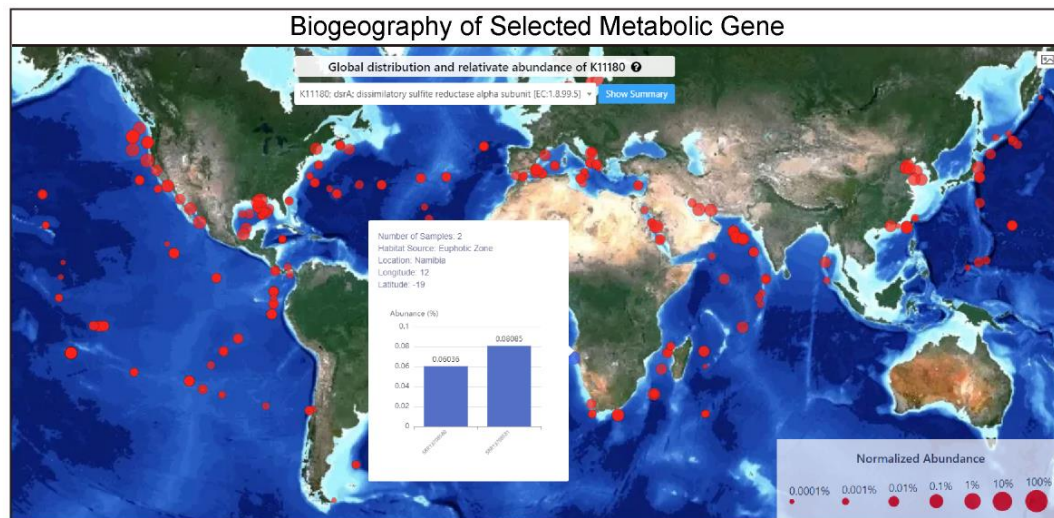
案例一：多样性分析和功能分析



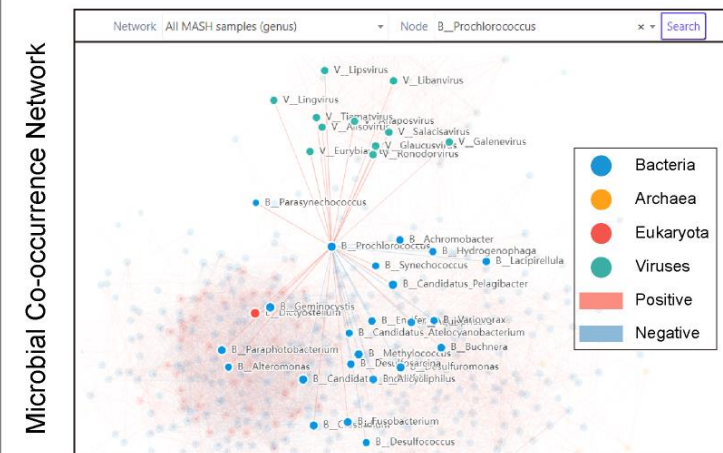


案例二：生物地理学与互作网络分析

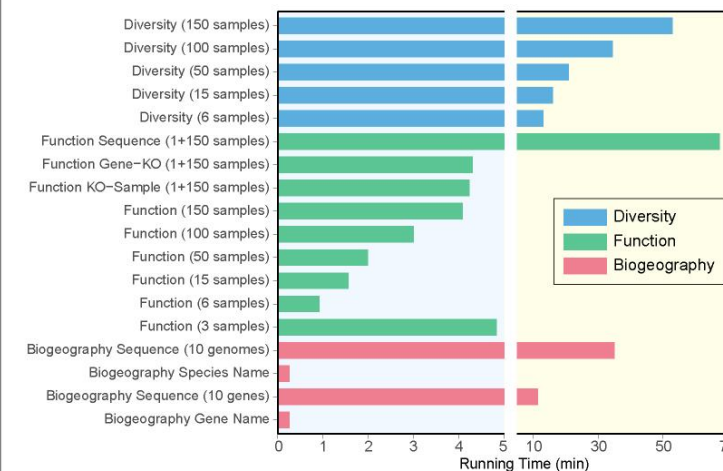
(C) Biogeography



(D) Interaction Network



(E) Running Time

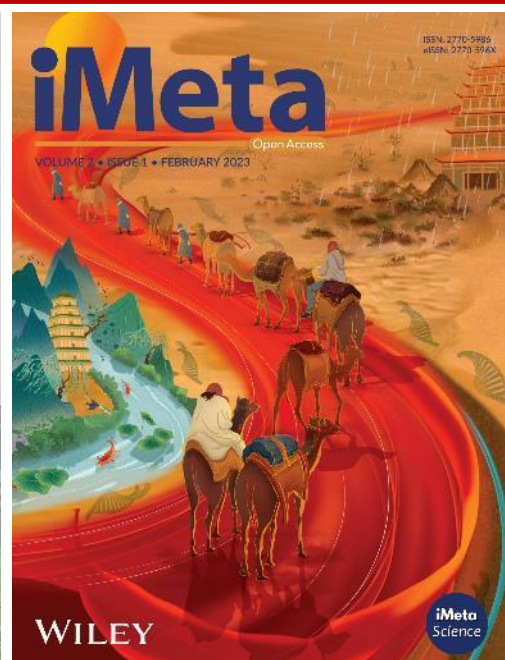
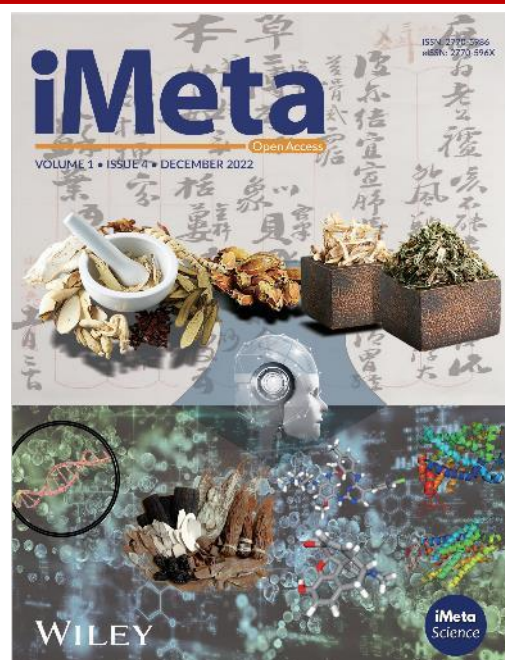
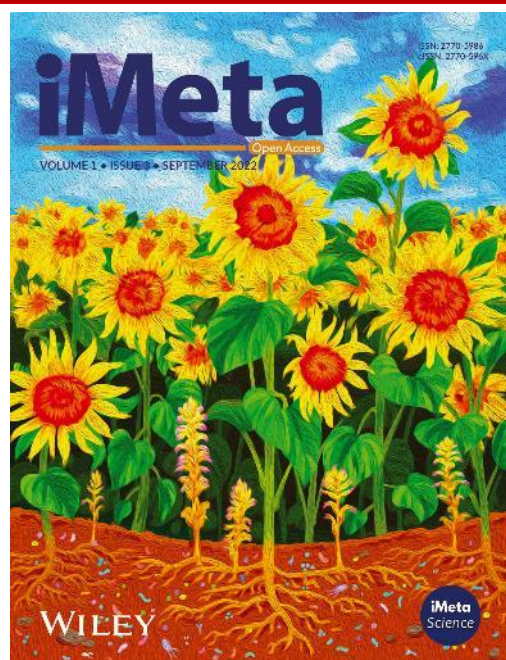




总结

- ❑ 在这项研究中，我们介绍了一个收集了与全球海洋环境相关公共宏基因组数据的用户友好型在线分析平台——**MASH Ocean**。
- ❑ **MASH-Ocean 1.0**目前包含**2,147**个宏基因组样本，并有五个分析模块：样本视图、多样性、功能、生物地理学和互作网络；您可以深入研究样本，比较多样性，分析代谢途径，甚至查看生物地理和交互网络。
- ❑ **MASH Ocean**也计划纳入微生物基因组数据，以增加**MASH-Ocean**的完整性。我们还将与其他数据库和在线分析平台，如**integrated microbiome analysis cloud platform (iMAC)**数据库等，进行更紧密的合作，以扩大和丰富**MASH-Ocean**平台的内容。
- ❑ 平台网址：<https://www.biosino.org/mash-ocean>

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“**iMeta**”由威立、肠菌分会和华人科学家出版的开放获取期刊，主编由中科院微生物所刘双江和荷兰格罗宁根大学傅静远教授共同担任。目的是发表原创研究、方法和综述以促进宏基因组学、微生物组和生物信息学发展。目标是发表前10%(IF>20)的高影响力论文。期刊特色包括视频投稿、可重复分析、图片打磨、青年编委、中英双语、50万用户的社交媒体宣传等。2022年2月发行，相继被**ESCI**、**Google Scholar**、**DOAJ**、**Scopus**等数据库收录，发文161篇，被引2316次([Dimension](#), 2024/2/19)!



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