# Article information:

Evolutionary diversification of methanotrophic ANME-1 archaea and their expansive virome | Nature Microbiology ~ 嗜甲烷的ANME-1古菌的进化多样性及其扩张性的病毒群 | 自然-微生物学
[https://www.nature.com/articles/s41564-022-01297-4?utm\_source=stork=referral=paid=CONR\_JRNLS\_AWA1\_CN\_CNPL\_STKRE\_NATURERJ](https://www.nature.com/articles/s41564-022-01297-4?utm_source=stork&utm_medium=referral&utm_content=paid&utm_campaign=CONR_JRNLS_AWA1_CN_CNPL_STKRE_NATURERJ)

# Article summary:

1. Anaerobic methanotrophic archaea (ANME) is a polyphyletic group of archaeal lineages that have independently evolved the ability to anaerobically oxidize methane.

2. ANME-1 form their own order ‘Candidatus Methanophagales’, which is sister to the non-methane alkane degraders ‘Candidatus Syntrophoarchaeales’ and ‘Candidatus Alkanophagales’.

3. This study recovered 13 metagenome-assembled genomes (MAGs) of ANME-1 from the Southern Pescadero Basin hydrothermal vent system in Mexico, including a previously uncharacterized deep-branching clade phylogenetically positioned at the base of the ANME-1 order.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

This article provides an overview of the evolutionary diversification of methanotrophic ANME-1 archaea and their expansive virome, as observed in samples from the Southern Pescadero Basin hydrothermal vent system in Mexico. The article is well written and provides a comprehensive overview of the topic, with clear explanations and relevant citations for each point made. The authors provide evidence for their claims by citing previous studies and experiments, as well as providing data from their own research on this topic.

The article does not appear to be biased or one-sided in its reporting; it presents both sides equally and fairly, providing evidence for both sides when necessary. It also does not appear to contain any promotional content or partiality towards any particular viewpoint or opinion on this topic. Furthermore, possible risks are noted throughout the article where appropriate, such as potential environmental impacts due to viral lysis in deep sea ecosystems.

In conclusion, this article appears to be trustworthy and reliable overall; it provides a comprehensive overview of its topic with relevant evidence and citations for each point made, while avoiding bias or one-sidedness in its reporting.

# Topics for further research:

* Methanotrophic archaea diversity
* Viral lysis in deep sea ecosystems
* Southern Pescadero Basin hydrothermal vent system
* ANME-1 archaea
* Methanotrophic archaea virome
* Evolutionary diversification of methanotrophic archaea

# Report location:

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