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Henneguya Salminicola

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- Scientists have discovered an animal **Henneguya Salminicola** which **does not need oxygen** to produce the energy needed for its survival.



- It is a **tiny, less than 10-celled parasite** which **lives in the muscles of salmon fish**.
- It does not have a **mitochondrial genome**.
 - Mitochondria is the **“powerhouse”** of the cell, which captures oxygen to make energy.
 - Its absence indicates that the parasite does not breathe oxygen.
- It is a **relative of jellyfish and corals** and as it evolved, it gave up breathing and consuming oxygen or **became anaerobic** to produce energy.
- However, it is **not yet clear how the parasite generates energy**. It may be drawing it from the surrounding fish cells or it may have a different type of respiration such as oxygen-free breathing, which typically characterises **anaerobic non-animal organisms** like **fungi, amoebas or ciliate lineages**.
- The discovery bears enormous **significance for evolutionary research**.
Aerobic respiration was thought to be prevalent in animals but now it is confirmed that animals can survive with anaerobic respiration.

Source: IE