

# (ALH) 84001- Meteorite from Mars

January 15, 2022

**In news**– A recent study has revealed that organic compounds found on the surface of the meteorite called (ALH) 84001—which landed on Earth from Mars in 1984 – were proof of ancient, primitive life on Mars.

## **Key updates-**

- The study points out that the **organic compounds found in the meteorite were a result of the interactions between water and rocks that occurred on Mars.**
- These interactions, the scientists observed, were similar to those that happen on Earth.
- These **kinds of non-biological, geological reactions are responsible for a pool of organic carbon compounds** from which life could have evolved and represent a background signal that must be taken into consideration when searching for evidence of past life on Mars.

## **About (ALH) 84001 meteorite-**

- **ALH84001 is thought to be one of the oldest Martian meteorites**, the 1.9-kg igneous rock proposed to have crystallized from molten rock 4.091 billion years ago.
- It **was found on the Allan Hills Far Western Icefield during the 1984–85** season, by Roberta Score, Lab Manager of the **Antarctic Meteorite Laboratory** at the Johnson Space Center.
- Chemical analysis suggests that it originated on Mars when there was liquid water on the planet's surface.
- There were also debates on the possibilities that the compounds could have come from volcanic activity, impact events on Mars or hydrological exposure.

## Meteorite basics-

- The difference between a meteor, meteorite and meteoroid is nothing but where the object is.
- **Meteoroids** are objects in space that range in size from dust grains to small asteroids.
- But when meteoroids enter the Earth's atmosphere they are called **meteors**.
- But if a meteoroid enters the Earth's atmosphere and hits the ground, it is called a **meteorite**.
- Scientists are interested in studying meteorites as examining them offers clues about the beginning of the solar system and maybe even the Earth.
- NASA's OSIRIS-REx mission was launched in 2018 with the aim of reaching asteroid Bennu and getting back a sample from the ancient asteroid.