State Microbe of Kerala

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Why in News?

The Government of Kerala has officially declared Bacillus subtilis as the State Microbe and dedicated the Centre of Excellence in Microbiome (CoEM) to the people.

- **Bacillus subtilis** – It is a ***type of probiotic or "good" bacteria*** found widely in the environment and naturally in the gut of humans as well as in fermented foods.
- **1st in the country** – Kerala, the first State in the country to officially declare its own State microbe.
- **Microorganisms beyond Pathogens** – The initiative springs from a simple idea - microorganisms are far more than pathogens.
- They are central to digestion, immunity, soil health, agriculture, ecological balance, and sustainable livelihoods.
- **Proposed by –** The concept of a State Microorganism was proposed by *Dr Sabu Thomas*, *Director of the CoEM*.
- **Aim –** To spark public awareness about the immense benefits of microbes and encourage their conservation.

Features

- **Scientific significance** – It is one of the *most extensively studied* microorganisms, serving as a model organism in microbiology and biotechnology.
- **Unique traits** – It is known for its ability to ***form heat-resistant spores*** that can survive for long periods.
- The bacterium is also *genetically competent*, allowing it to take up external DNA—making it a valuable tool for genetic and biomedical research.
- **Industrial & Research Importance** – Its fully sequenced genome and strong protein-secretion capacity have made it a major workhorse in industrial biotechnology.
- **Probiotic Properties** – It is valued for its probiotic properties, helps improve gut health by producing antimicrobial compounds –
- That inhibit harmful pathogens, supports digestion, and strengthens the intestinal barrier—benefits that have led to its use in human and animal probiotic supplements worldwide.

National microbe** – In October 2012, India declared **Lactobacillus delbrueckii

subsp. bulgaricus *(used in curd, yoghurt, cheese) as the National Microbe.*

Quick Fact

Centre of Excellence in Microbiome (CoEM)
• **CoEM** – It was established by the Kerala Govt. through Kerala State Council for Science, Technology and Environment (KSCSTE). • **In partnership with** – Kerala Development and Innovation Strategic Council (K-DISC), and with scientific mentoring from the Rajiv Gandhi Centre for Biotechnology (RGCB). • **Motto** – "Microbes for Life." • **Aim** – To promote cutting-edge research, innovation, and entrepreneurship across domains such as human health, animal health, agriculture, aquaculture, and environmental sustainability.

References

1. The Hindu | Kerala declares Bacillus subtilis 'State microbe'
2. South First | Kerala declares Bacillus subtilis 'State microbe'

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