

Methane from microbes: a fuel for the future

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Microbes could provide a clean, renewable energy source and use up carbon dioxide in the process, suggested Dr James Chong at a Science Media Centre press briefing today.

“Methanogens are microbes called archaea that are similar to bacteria. They are responsible for the vast majority of methane produced on earth by living things” says Dr Chong from York University. “They use carbon dioxide to make methane, the major flammable component of natural gas. So methanogens could be used to make a renewable, carbon neutral gas substitute.”

Methanogens produce about one billion tonnes of methane every year. They thrive in oxygen-free environments like the guts of cows and sheep, humans and even termites. They live in swamps, bogs and lakes. “Increased human activity causes methane emissions to rise because methanogens grow well in rice paddies, sewage processing plants and landfill sites, which are all made by humans.”

Methanogens could feed on waste from farms, food and even our homes to make biogas. This is done in Europe, but very little in the UK. The government is now looking at microbes as a source of fuel and as a way to tackle food waste in particular.

Methane is a greenhouse gas that is 23 times more effective at trapping heat than carbon dioxide. “By using methane produced by bacteria as a fuel source, we can reduce the amount released into the atmosphere and use up some carbon dioxide in the process!”

Source: Society for General Microbiology

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