

September 16, 2020



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Industrial Microbes Announces Issuance of Key Patent

ALAMEDA, Calif. – Industrial Microbes, a leader in developing sustainable chemical processes using microbes, announced today the issuance of a foundational patent in the U.S. (US 10,689,674) for the core component of its technology to turn methane into valuable chemicals using fermentation. This broad patent relates to the successful expression of an enzyme in *E. coli* that enables the cell to convert methane into methanol.

Methane is an ideal raw material for chemical production due to its low cost, abundance, and energy density. Renewable methane is available from landfills, wastewater treatment, farms, and food waste from the degradation of organic matter. Fermentation of methane into chemicals has attracted a significant amount of attention over the years, but the challenges of working with natural methane-consuming bacteria prevented the commercialization of any such technology. Engineering *E. coli* to consume methane circumvents many of those problems.

“Methane is a feedstock that has the potential to transform the bioeconomy by lowering costs, unlocking new chemical markets, and reducing carbon emissions. The combination of methane-oxidation and the flexibility of working with *E. coli* as a host offers a powerful platform for industrial biotechnology,” said Derek Greenfield, Ph.D., Industrial Microbes CEO. “*E. coli* has been used in large-scale fermentations for decades, and by expanding the suite of raw materials, we can leverage the power of synthetic biology to make chemicals in a low-cost, greener process.”

The ability to oxidize methane into methanol is the critical first biological step for building more complex molecules. Though natural methane-oxidizing bacteria have been studied for decades, no one had previously demonstrated a strain of *E. coli* with the ability to turn methane into methanol *in vivo*. This key enzyme can also oxidize ethane, another component of natural gas, into ethanol. This breakthrough has been a component of several subsequent projects by the Industrial Microbes team to build complete biological pathways from methane and ethane to a variety of specialty and commodity chemicals.

About Industrial Microbes

Industrial Microbes is a synthetic biology startup commercializing new processes for methane-based fermentation. Founded in 2014 by three synthetic biologists, the Company has funding from government grants and Silicon Valley private investors. The Company's vision is to develop technologies that create both economic and environmental value. More information about the Company and its technology can be found on its website at www.imicrobes.com.