

Researchers ask important questions on what happens to oil after a spill

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Very little is known about what happens to oil in the ocean after an oil spill and what happens to it once a chemical dispersant has been applied. New research summarizes what is known and what important knowledge gaps remain.

Investigators note that there is a great need to study extracellular polymeric substances (EPS), which are polymers released into the environment by microbes such as bacteria and phytoplankton in response to [environmental stresses](#). EPS help determine the fate and transport of oil after a [spill](#).

"The production of marine oil snow and its sedimentation and accumulation to the seafloor were observed on an expansive scale after the Deepwater Horizon oil spill in the Northern Gulf of Mexico in 2010," said Dr. Antionetta Quigg, lead author of the *Limnology & Oceanography Letters* study. Marine oil snow is a shower of organic matter that interacts with oil and falls from upper waters to the deep ocean.

"To improve our response to future [oil spills](#), we need a better understanding of the biological and physiochemical controls of EPS production by microbes under a range of environmental conditions, and in this paper, we provide the key knowledge gaps that need to be filled to do so," said Dr. Quigg. "This work is only possible because of the dedication of numerous students, postdocs, and colleagues working collaboratively across traditional boundaries of biology, chemistry, and

oceanography."

More information: Antonietta Quigg et al, The role of microbial exopolymers in determining the fate of oil and chemical dispersants in the ocean, *Limnology and Oceanography Letters* (2016). [DOI: 10.1002/lol2.10030](https://doi.org/10.1002/lol2.10030)

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