Gain insight into modern medical research and learn how understanding ancient microbes can provide new ways to treat chronic infections.

**THURSDAY, SEPTEMBER 7, 2017**

6:00 p.m. Reception
*with cocktails, hors d'oeuvres, and buffet stations*
7:15 p.m. Program
8:10 p.m. Dessert buffet and networking

**The Sea by Alexander’s Steakhouse**
4269 El Camino Real, Palo Alto 94306

$75 per person for members, $95 per person for non-members

*Attire: Business casual*

Kindly respond by visiting [associates.caltech.edu/0907](http://associates.caltech.edu/0907) or contact Ruby Rico at caltechassociates@caltech.edu or (626) 395-6392.
About the Program

Infectious diseases touch the lives of millions of people on the planet. The Gordon M. Binder/Amgen Professor of Biology and Geobiology, and the Executive Officer for Molecular Biology, Dianne Newman will bring together her unique expertise and research experience to develop new approaches, inspired by the geosciences, to understanding and treating chronic infections. By studying microorganisms that dominated the biosphere for billions of years in the absence of oxygen, Professor Newman is able to better understand how modern disease-causing microorganisms thrive in similar conditions inside of the human body. This research on microbes is what lead to her MacArthur Award in 2016. She will also discuss her clinical partnership with Children’s Hospital Los Angeles.

About the Speaker

Dianne Newman began her professional training as an environmental microbiologist in the laboratory of a geochemist but was introduced to bacterial genetics as a visiting scholar at Princeton. The elegance and power of genetic approaches motivated her to seek postdoctoral training in a bacterial genetics laboratory. When she began her independent career, she attempted to blend these fields by using genetic approaches to study how bacteria catalyze geochemically interesting metabolic reactions. She joined the Caltech faculty in 2000 as professor of geobiology. She received the National Institutes of Health Director’s Transformative Research Award in 2012 for applying geobiological approaches to understanding pulmonary infections in situ, and this year she received the National Academy of Sciences Award in Molecular Biology. She was recently selected as a MacArthur Fellow in 2016.

The image below is from Professor Newman's research and depicts pathogens that were embedded in mucus coating the lungs of an individual with cystic fibrosis.