



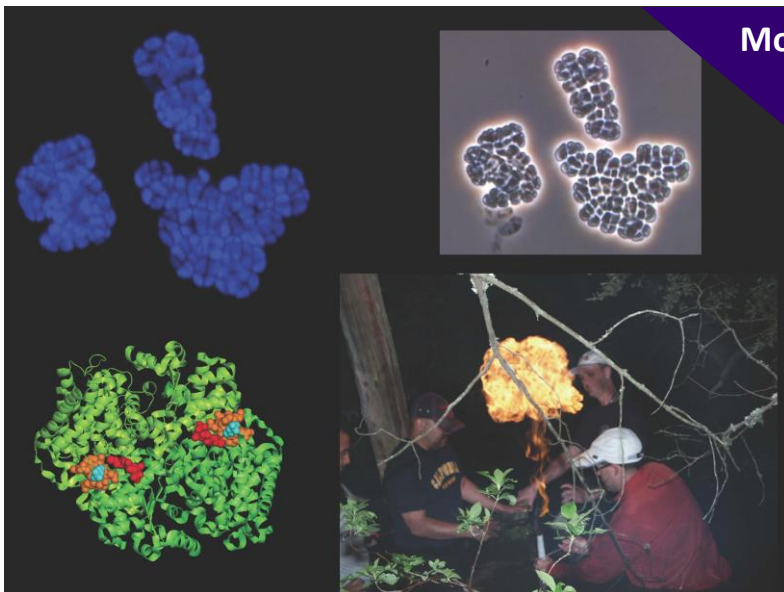
Faculty Search Biology Seminar

Speaker: **Dipti Nayak**

University of Illinois | Life Sciences Research Foundation Postdoctoral Fellow & Carl R. Woese Institute for Genomic Biology Fellow

<https://diptinayak.github.io/>

CRISPR-guided insights into the physiology and evolution of methanogenic archaea



Monday, February 26, 2018 | 12:00pm
HCK 132 Refreshments at 11:45am

Members of the Archaea (the third domain of life) that can produce methane are referred to as methanogens. These organisms are prevalent in a wide range of anoxic environments, including the human distal gut, and account for 75 to 80 percent of the annual methane emissions on our planet. Therefore methanogens have significant implications for climate science, biotechnology and even aspects of human health. Despite their importance, the physiology and evolution of methanogens is still poorly understood. During this talk, I

will first discuss the development of high-throughput genetic approaches, including CRISPR-Cas9 based tools developed during my postdoctoral research, to study these pivotal microorganisms. Subsequently, I will describe two examples to highlight how the application of these genetic approaches has facilitated studies pertaining to the unusual biochemistry and functional evolution of enzymes involved in methanogenic metabolism.

Seminar Speaker Host: Ben Kerr

