Faculty Search Biology Seminar



Speaker: Patrick Shih

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Dissecting and reconstructing plant metabolism with synthetic biology



Monday, March 05, 2018 | 12:00pm HCK 132 Refreshments at 11:45am

Much of the ingenuity of life has revolved around the evolution of novel metabolic pathways, which has unlocked novel chemistries and expanded the molecular repertoire of nature. In particular, plants have been especially successful through the evolution of many unique and relevant metabolisms, ranging from synthesis of specialized compounds that can be used as pharmaceuticals (e.g., morphine) to broad processes that drive our planet's elemental cycles (e.g., photosynthesis). As a result, life as we know it could not exist without plants. My research leverages synthetic biology for two ultimate goals: 1) expanding the metabolic repertoire of plants for new traits and 2) experimentally testing our understanding of the origins of key

metabolisms that have fundamentally altered our biosphere. By combining evolutionary and synthetic biology approaches, I am interested in how evolutionary insights may help guide metabolic engineering efforts for future applications.

Seminar Speaker Host: Jennifer Nemhauser