

The 2014-15 NOBCCChE Lectureship at the University of Pennsylvania

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Brown University

*Microbially Inspired Solutions to Challenges
in Medicine and in Energy*



Streptomyces is a large genus of soil-dwelling, Gram-positive bacteria whose members are best known as producers of more than half of all the microbial natural products. Importantly, they are the source of two-thirds of the antibiotics used in clinical and veterinary medicine as anti-infectives, anti-cancer drugs, and immunosuppressants.

I contend that the metabolic and physiological peculiarities that enable streptomycetes to flourish in nutrient-poor, yet biodiverse terrestrial ecosystems provide a well-spring of solutions to challenges in medicine and in energy. Members of my research group and I have been investigating new approaches to antibacterial therapy and to the production of biofuels from plant biomass that are inspired by the metabolism of Streptomyces bacteria. In this seminar, I will illustrate how we synergistically apply experimental methods from synthetic organic chemistry, molecular microbiology, biochemistry, and genomics in pursuit of novel antibacterial agents and new platforms for sustainable bioenergy.

Monday, October 20, 2014

4:00 PM

Carolyn Hoff Lynch Lecture Hall

For more information on Prof. Sello, please visit:
<https://vivo.brown.edu/display/jsello>

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