Elena Herzog

Chemical and enzymatic modification for visualization of natural products in microbial interactions

There are several ways to study and visualize biological systems. The most common way to visualize living cells is fluorescence microscopy. However, this requires bulky labelling molecules that could interfere with various cellular processes and impair the native function of small biomolecules. Raman spectroscopy offers a promising alternative for visualizing these interactions, as only small label tags are needed. The target molecules are to be modified in such a way that their functionality is preserved and at the same time they provide strong Raman signals. Through specific chemical synthesis, small alkyne tags can be introduced into the molecule without affecting their functionality. The aim of my study is to gain new insights into the function and distribution of small biomolecules in microbial cells that are difficult to access using other methods.

Supervisor

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