



Rolf Mueller, Prof. Dr., contact information

http://www.helmholtz-hzi.de/en/organisation/locations/hips_saarbruecken/

Title: MS and genome based methods to identify novel bacterial natural products

Abstract: Natural products continue to be the most valuable source for anti-infective therapy and are urgently needed to combat new and multiresistant pathogens. Mostly derived from microorganisms, the challenge today is that “the low hanging fruit” has been harvested and consequently methods need to be developed to increase chances to detect truly novel metabolites from complex crude extracts of bacterial cell growth. I will present our recent work aiming at a combination of biodiversity research with improved analytical setups to allow for fast dereplication of known compound classes enabling a focus on truly novel secondary metabolites. This work is combined with genomic knowledge and allows for the isolation and further characterization of compounds by NMR to fully elucidate the three-dimensional structure and subsequently study biosynthesis and mode of action which is required to move along the drug development pipeline.