Genomics-inspired discovery of natural products.

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Abstract

The massive surge in genome sequencing projects has opened our eyes to the overlooked biosynthetic potential and metabolic diversity of microorganisms. While traditional approaches have been successful at identifying many useful therapeutic agents from these organisms, new tactics are needed in order to exploit their true biosynthetic potential. Several genomics-inspired strategies have been successful in unveiling new metabolites that were overlooked under standard fermentation and detection conditions. In addition, genome sequences have given us valuable insight for genetically engineering biosynthesis gene clusters that remain silent or are poorly expressed in the absence of a specific trigger. As more genome sequences are becoming available, we are noticing the emergence of underexplored or neglected organisms as alternative resources for new therapeutic agents.

Beteiligte Forschungseinheiten

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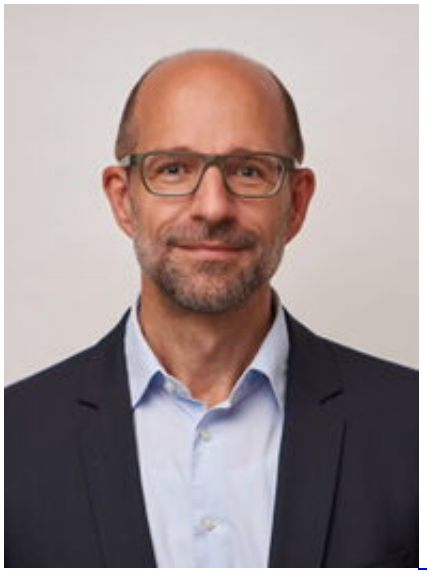

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