

Discovery of biologically active fungal metabolites resulting from an international, interdisciplinary research scenario

Marc Stadler

Helmholtz-Centre for Infection Research, Germany

Over the past years, we have been able to build up a sustainable, international network with leading researchers from all over the world to explore systematically the mycobiota of tropical countries for their potential to produce novel chemical entities with potential to combat infectious diseases. In addition, we have targeted rare European species that are difficult to culture.

Over the past 5 years, these activities have resulted in the discovery of over 150 new bioactive metabolites that were published in over 50 original publications. The key to the success of these projects was actually the collaboration of chemists with leading taxonomists and other biodiversity researchers. Most of the new compounds were isolated from new genera and species that were concurrently discovered in the course of taxonomic studies. Some of the new metabolites discovered have substantial potential for application, even though their evaluation is still in a rather early stage and it may take a long time and substantial efforts and additional funding until they even reach preclinical development. The strategy of this approach will be outlined, also including some highlights from our recent research in an international, interdisciplinary scenario.