LS09-042 - TOXI-GENOME: Understanding and exploiting epigenetic chromatin regulation mechanisms to mine fungal genomes for novel secondary metabolites

Zusammenfassung

In nature, fungi use a large arsenal of natural chemicals for their combat against bacteria and other competitors. One such chemical, for example, is penicillin, the founder substance of antibiotics, which have revolutionized treatment of infectious diseases. Life-threatening complications arising from multiresistant infectious strains made it necessary to constantly look for new antibiotics, but despite the fact that natural products are chemically rich and thus preferable antibiotics, the discovery of novel fungal antibiotics remains difficult. Recent research from our and a number of other laboratories shed some new light into the molecular events regulating the production of fungal natural chemicals. In this project we plan to further deepen this molecular information and try to exploit it by developing a screening system for novel bioactive compounds based on our ability to wake up silent biosynthetic genes in fungi.

Schlagworte:
fungi, secondary metabolites, chromatin, epigenetics, antibiotics

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Principal Investigator:	Joseph Strauss
Institution:	University of Natural Resources and Life Sciences, Vienna
Weitere Projektpartner:innen:	Martin Wagner (University of Veterinary Medicine Vienna) Rudolf Krska (BOKU University Vienna)



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Weiterführende Links zu den beteiligten Personen und zum Projekt finden Sie unter
https://www.wwtf.at/funding/programmes/ls/LS09-042/