LS09-055 - Towards sustainable food and bioenergy security for society: Establishing an academic compound screening platform in Vienna to characterize and modulate Strigolactone synthesis in plants.

Zusammenfassung

Strigolactones (SLs) are a recently identified novel class of plant hormones. SLs limit the outgrowth of shoot branches but they are also secreted by roots to the sourounding soil where they serve as attractant for symbiontic fungi but also for parasitic weeds. Our main aim is to identify chemical inhibitors of SL production. To this purpose we will establish the first academic compound screening platform in Austria, a powerful new tool in modern biology, which will be made accessible to the Viennese research community. SL inhibitors will be useful to better understand how this hormone exerts its effects in the plant. Such compounds would also have potential for agricultural applications since the number of side branches is a key determinant of flower, fruit and seed production as well as overall biomass allocation in crops and trees. Moreover they could act as control agents to limit parasitic weed infections, one of the major causes for crop failure in Africa and Asia.

Keywords:
cheminformatics, small molecule screen, enzyme inhibitor, strigolactones, shoot branching, rootparasitic plants

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Weiterführende Links zu den beteiligten Personen und zum Projekt finden Sie unter
https://wwtf.at/funding/programmes/ls/LS09-055/