LS05-003 - Crosstalk between SUMO and ubiquitin

Zusammenfassung

Posttranslational modifications with ubiquitin and SUMO (small ubiquitin related modifier) are important regulators to maintain cellular integrity. Modifications occur via ATP- dependent enzymatic cascades including E1, E2 and E3 enzymes.

Recently, we identified a ubiquitin E2 enzyme as SUMO target. Biochemical analysis indicates that modification severely reduces the function of this particular enzyme. This opens up the intriguing possibility that inhibition of a ubiquitin E2, which potentially work with several E3s, results in widespread consequences for the cell by influencing a large subset of substrates.

The focus of the proposed project will investigate whether other ubiquitin E2 enzymes are sumoylated and what are the respective consequences. This work will contribute to our understanding of ubiquitin regulation and will present a prerequisite for new drug development.

Schlagworte:
posttranslational Modification, SUMO, ubiquitin, enzymes

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Weiterführende Links zu den beteiligten Personen und zum Projekt finden Sie unter
https://www.wwtf.at/funding/programmes/ls/LS05-003/