

Sondertermin

SFB 960-/BZR – Kolloquium-
Montag 19.11.2018, 15:00 Uhr
DE 2.133 (Neubau Biologie)



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Mouse models of diseases, ubiquitin ligases, proteases and their inhibitors, epidermis, genome editing

Ubiquitylation-mediated processes in health and disease

Using mutant mouse models we are addressing the role of several ubiquitin ligases whose function and role have not been described – the field of Ub-ligases and deubiquitinases is of key importance for cellular processes and many of the genes in the Ub-ligase and deubiquitinase families (altogether around 900 members) have not been investigated so far, or investigated only poorly. A major focus of these studies is to understand the role of ubiquitination in regulating intestinal barrier function, immunity, and to characterize links with human inflammatory bowel disease. In our current work we focus on cullin-RING ubiquitin ligases involved in GIT homeostasis and pathological processes since the cullin family has been largely associated with different types of cancer in GIT and thus represents a promising pharmacological target. We use RNA in situ hybridization, qRT-PCR and LacZ reporter systems to localize expression of components of cullin-RING –ubiquitin ligase complexes together with conditional transgenic models to specifically assess the role of cullin dependent ubiquitination in GIT. We are studying also other U3 ligases using conditional, mouse models, among them Btd3, Trim15, Rnf121, Wdsub1, Mex3b, and others.

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