

SFB 960-/BZR – Kolloquium

10. Dezember 2015, 17.00 Uhr

Neubau Biologie, H 53



Dr. Alessandro Vannini

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“New tricks from an old dog: novel roles for RNA Polymerase III transcription in oxidative stress and cancer”

Abstract:

"In vertebrates, TFIIIB-related factor 2 (Brf2) recruits RNA Polymerase III to gene-external promoters, including the selenocysteine tRNA gene. High levels of Brf2 expression have been linked to tumourigenesis but the underlying mechanisms remain obscure. Integrating x-ray crystallography with functional data in vitro and in living cells we were able to define the molecular basis of Brf2-dependent RNA Polymerase III transcription, unveiling an unpredicted Brf2 redox-sensing module. We established Brf2 as a central modulator of cellular responses to oxidative stress, mechanistically linking Brf2 overexpression and enhanced resistance to reactive oxygen species, a hallmark of cancer cells."

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