Making sense of sensing: Identification of bat-specific nucleic acid sensors

Initiative: "Experiment!" (beendet)

Ausschreibung: Explorative Phase

Bewilligung: 11.10.2016

Laufzeit: 1 Jahre 6 Monate

Projekt-Website: https://virologie-ccm.charite.de/en/research/ag_mueller/

The immune response of vertebrates is a major control center deciding over survival and death of an organism. First annotations of complete bat genomes uncovered a modified and reduced repertoire of immune- and stress-related genes. These genotypic differences are thought to be connected with a long lifespan, a low risk for developing cancer, and a lack of developing clinical diseases upon virus infections - probably explaining why bats serve as a major reservoir host for human pathogenic viruses. The genotypic differences may be a result of unique features in bat's innate immune response to foreign or damaged nucleic acids. In this project, the bat-specific nucleic acid sensing machinery should be identified and characterized using a combination of quantitative interaction proteomics and functional assays. The identification of the bat nucleic acid sensing repertoire is expected to pave the avenue for the development of new therapies related to autoimmunity, cancer, and infections.

Projektbeteiligte

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