Cologne Cell Death Club Seminar

SFB 1403 CELL DEATH IN IMMUNITY, INFLAMMATION AND DISEASE

Speaker: Sven Saupe
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Information about the Saupe Lab

Tuesday 19.04.2022 at 1 pm

"The study of non-self recognition in fungi identifies cell death pathways with cross-kingdom conservation"

Register here to receive the Zoom login data:
https://uni-koeln.zoom.us/meeting/register/tJIlcuisqj4qGddJ_slVp4MRv5A0tLybM6v2

Abstract:
Filamentous fungi display genetic systems discriminating self from conspecific non-self, so that somatic fusion between unlike individuals typically leads to cell death. Cell death by incompatibility limits cytoplasmic exchanges between individuals and consequently horizontal transmission of mycoviruses. As such incompatibility systems ensure a form of anti-viral prophylaxis in fungi. We have been studying the determinants of cell death by incompatibility in *Podospora anserina* for decades and have now completed the characterization of all known incompatibility systems in that species. These nine systems cover a range of regulated cell death mechanisms and remarkably (or may be not) every single one of them bears some relation with defense and regulated cell death modules identified in other phyla, including plants, animals and bacteria. We will in particular describe the role of Nod-like receptors and amyloid signaling in incompatibility as well as necroptotic and pyroptotic cell death pathways. Our general model is that incompatibility systems derive by exaptation (*sensus* Vrba and Gould) from fungal immune pathways that seem to have a lot in common with plant, animal and bacterial defense systems.

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Information on the Cell Death Club seminar series and registration are advertised via the local mailing lists and is provided on the website of the SFB 1403.

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