

**12<sup>th</sup> Summer Academy “Infection and Immunity”**  
**Lecture 9 on Thursday, 21 July, 2022**

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**“Immune mechanisms of virus control”**

**Publications for seminar preparation:**

Adomati T, Cham LB, Hamdan TA, Bhat H, Duhan V, Li F, Ali M, Lang E, Huang A, Naser E, Khairnar V, Friedrich SK, Lang J, Friebus-Kardash J, Bergerhausen M, Schiller M, Machlah YM, Lang F, Häussinger D, Ferencik S, Hardt C, Lang PA, Lang KS. Dead cells induce innate anergy via MERTK after acute viral infection. *Cell Reports* 2020; 30(11):3671-3681.

Lang J, Bohn P, Bhat H, Jastrow H, Walkenfort B, Cansiz F, Fink J, Bauer M, Olszewski D, Ramos-Nascimento A, Duhan V, Friedrich SK, Becker KA, Krawczyk A, Edwards MJ, Burchert A, Huber M, Friebus-Kardash J, Göthert JR, Hardt C, Probst HC, Schumacher F, Köhrer K, Kleuser B, Babiychuk EB, Sodeik B, Seibel J, Greber UF, Lang PA, Gulbins E, Lang KS. Acid ceramidase of macrophages traps herpes simplex virus in multivesicular bodies and protects from severe disease. *Nature communications* 2020; 11(1):1338.

Khairnar V, Duhan V, Patil AM, Zhou F, Bhat H, Thoens C, Sharma P, Adomati T, Friedrich SK, Bezgovsek J, Dreesen JD, Wennemuth G, Westendorf AM, Zelinsky G, Dittmer U, Hardt C, Timm J, Göthert JR, Lang PA, Singer BB, Lang KS. CEACAM1 promotes CD8<sup>+</sup> T cell responses and improves control of a chronic viral infection. *Nature communications* 2018;9(1):2561

Kalkavan H, Sharma P, Kasper S, Helfrich I, Pandya AA, Gassa A, Virchow I, Flatz L, Brandenburg T, Namineni S, Heikenwalder M, Höchst B, Knolle PA, Wollmann G, von Laer D, Drexler I, Rathbun J, Cannon PM, Scheu S, Bauer J, Chauhan J, Häussinger D, Willimsky G, Löhning M, Schadendorf D, Brandau S, Schuler M, Lang PA, Lang KS. Spatiotemporally restricted arenavirus replication induces immune surveillance and type I interferon-dependent tumour regression. *Nature communications* 2017;8:14447.

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survival and is essential for protective antiviral antibody production Nature communications 2015; 6:6217