

Publications by Stefan Oehlers (as of May 2025)

Preprints:

Han DJY, Sui X, Sorayah R, Hoeppner LH, **Oehlers SH***. The repurposed STAT3 inhibitor pyrimethamine controls mycobacterial infection-induced vascular permeability and mycobacterial burden. *bioRxiv*. Posted 28 November 2024

Chang X, Li Z, Khac Thai PV, Minh Ha DT, Thuong Thuong NT, Wee D, Binte Mohamed Subhan AS, Silcocks M, Eng Chee CB, Quynh Nhu NT, Heng CK, Teo YY, Singal A, **Oehlers SH**, Yuan JM, Koh WP, Caws M, Khor CC, Dorajoo R, Dunstan SJ*. Genome-wide association study reveals a novel tuberculosis susceptibility locus in multiple East Asian and European populations. *medRxiv*. Posted 24 April 2025

Wee D, Pandey M, Chen Y, Lorenzini PA, Chow EWL, Wang Y, Singhal A, **Oehlers SH***. Primary tuberculous mycobacterial granulomas provide a niche for superinfecting *Mycobacterium abscessus*. *bioRxiv*. Posted 6 May 2025

Shell SS*, Bar-Oz M, Xiao J, Pandey M, Bellardinelli J, Jackson M, **Oehlers SH**, Barkan D*, Meir M. GpIR1, an unusual TetR-like transcription factor in *Mycobacterium abscessus*, controls the production of cell wall glycopeptidolipids, colony morphology, and virulence. *bioRxiv*. Posted 8 May 2025

Han DJY, Costa DM, Luo G, Wright K, Pandey M, Wee D, Chen Y, Akincilar SC, Tergaonkar V, Dorajoo R, Carissimo G, Singhal A, Elks PM, Henriques CM, Yan B, Mostowy S, **Oehlers SH***. Telomerase reverse transcriptase is required for resistance to mycobacterial infection. *bioRxiv*. Posted 18 May 2025

Primary research publications:

Akincilar SC, Fidan K, Kumar N, Ng QF, Majee P, Wu L, Han DJY, Chan CHT, Chua JYH, Idzham K, Oji A, Lee WJJ, **Oehlers SH**, Ikawa M, Tergaonkar V* (2025). Evolutionarily conserved role of Telomerase reverse transcriptase (TERT) in programming the microenvironment via regulation of cGAS/STING pathway. *Nat. Cell Biol.* In press

Wright K, Han DJY, Song R, de Silva K, Plain KM, Purdie AC, Shepherd A, Chin M, Hortle E, Wong JJL, Britton WJ, **Oehlers SH*** (2024). Zebrafish *tsc1* and *cxcl12a* increase susceptibility to mycobacterial infection. *Life Sci Alliance*. 7(4):e202302523

Resseguier J*, Nguyen-Chi M, Wohlmann J, Rigaudeau D, Salinas I, **Oehlers SH**, Wiegertjes Gf, Johansen Fe, Qiao Sw, Koppang Eo, Verrier B, Boudinot P, Griffiths G* (2023). Identification of a new pharyngeal mucosal lymphoid organ in zebrafish and other teleosts: tonsils in fish?. *Sci Adv*. 9(44):eadj0101.

Shihana F, Manuneechi Cholan P, Fraser S, **Oehlers SH**, Seth D* (2023). Investigating the role of lipid genes in liver disease using fatty liver models of alcohol and high fat in zebrafish (*Danio rerio*). *Liver Int*. 43(11):2455-2468.

Dupuy A, Aponte Santamaría C, Yeheskel A, Hortle E, **Oehlers SH**, Gräter F, Hogg PJ, Passam FH, Chiu J* (2023). Mechano-Redox Control of Macrophage-1 Antigen De-Adhesion From ICAM-1 (Intercellular Adhesion Molecule 1) by Protein Disulfide Isomerase Promotes Directional Movement Under Flow. *Circ Res*. 132:e151–e168.

Kam JY, Wright K, Britton WJ, **Oehlers SH*** (2022). Treatment of infection-induced vascular pathologies is protective against persistent rough morphotype *Mycobacterium abscessus* infection in zebrafish. *Microb. Pathog.* 167:105590.

Hortle E*, Tran LV, Wright K, Fontaine ARM, Pinello N, Wong JJJ, Hansbro PM, Britton WJ, **Oehlers SH*** (2022). OXSR1 inhibits inflammasome activation by limiting potassium efflux during mycobacterial infection. *Life Sci Alliance*. 5(9):e202201476.

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Hawkins PME, Hoi DM, Cheung CY, Wang T, Quan D, Sasi VM, Liu DY, Linington RG, Jackson CJ, **Oehlers SH**, Cook GM, Britton WJ, Clausen T, Payne RJ* (2022). Potent Bactericidal Antimycobacterials Targeting the Chaperone ClpC1 Based on the Depsipeptide Natural Products Ecumicin and Ohmyungsamycin A. *J Med Chem*. 65(6):4893-4908.

Manuneechi Cholan P*, Morris S, Luo K, Chen J, Boland JA, McCaughan GW, Britton WJ, **Oehlers SH*** (2021). Transplantation of high fat fed mouse microbiota into zebrafish larvae identifies MyD88-dependent acceleration of hyperlipidaemia by Gram-positive cell wall components. *Biofactors*. 48(2):329-341. *Winner of 2022 Wiley BioFactors Young Investigator Prize*.

Hoque MM, Noorian P, Espinoza-Vergara G, Manuneechi Cholan P, Kim M, Rahman MH, Labbate M, Rice SA, Pernice M, **Oehlers SH**, McDougald D* (2022). Adaptation to an amoeba host drives selection of virulence-associated traits in *Vibrio cholerae*. *ISME J*. 16(3):856-867.

Kam JY, Hortle E, Krogman E, Warner SE, Wright K, Luo K, Cheng T, Manuneechi Cholan P, Kikuchi K, Triccas JA, Britton WJ, Johansen MD, Kremer L, **Oehlers SH*** (2022). Rough and smooth variants of *Mycobacterium abscessus* are differentially controlled by host immunity during chronic infection of adult zebrafish. *Nat Commun*. 13(1):952.

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Reviews and commentaries:

Johansen MD, Spaink HP, **Oehlers SH**, Kremer L* (2023). Modeling non-tuberculous mycobacterial infections in zebrafish. *Trends Microbiol.* 32(7):663-677.

Oehlers SH*, Hortle E, Cook KM (2020). A zebrafish model of tuberculosis comorbidity and the effects of HIF-activating intervention. *FEBS J.* 287(18):3917-3920. (Invited commentary)

Hortle E, **Oehlers SH*** (2020). Host-directed therapies targeting the tuberculosis granuloma stroma. *Pathog Dis*, 78(2):ftaa015. (Review)

Methods:

Cheng T, Kam JY, Johansen MD, **Oehlers SH*** (2020). High content analysis of granuloma histology and neutrophilic inflammation in adult zebrafish infected with *Mycobacterium marinum*. *Micron*, 129:102782.