

Wichtige Arbeiten ab 2010

Darmoise, A., S. Teneberg, L. Bouzonville, R.O. Brady, M. Beck, S.H.E. Kaufmann, F. Winau. Lysosomal α -galactosidase controls the generation of self lipid antigens for NKT cells.
Immunity 33:216-228 (2010). <https://doi.org/10.1016/j.immuni.2010.08.003>

Dorhoi, A., C. Desel, V. Yeremeev, O. Gross, L. Pradl, V. Brinkmann, H.-J. Mollenkopf, K. Hahnke, J. Ruland and S.H.E. Kaufmann: The adaptor molecule CARD9 is essential for tuberculosis control.
J. Exp. Med. 207:777-792 (2010). <https://doi.org/10.1084/jem.20090067>

Kaufmann, S.H.E., G. Hussey, P.-H. Lambert: New vaccines for tuberculosis.
The Lancet 375: 2110-2119 (2010). [https://doi.org/10.1016/S0140-6736\(10\)60393-5](https://doi.org/10.1016/S0140-6736(10)60393-5)

Kaufmann, S.H.E: Future vaccination strategies against tuberculosis: thinking out of the box.
Immunity 33:567-577 (2010). <https://doi.org/10.1016/j.immuni.2010.09.015>

Reece, S.T., C. Loddenkemper, D.J. Askew, U. Zedler, S. Schommer-Leitner, M. Stein, F.-A. Mir, A. Dorhoi, H.-J. Mollenkopf, G.A. Silverman, S.H.E. Kaufmann: Serine protease activity contributes to control of tuberculosis in hypoxic granulomas in mice. *J. Clin. Invest.* 120:3365-3376 (2010)
<https://doi.org/10.1172/JCI42796>

Maertzdorf, J., J. Weiner, H.-J. Mollenkopf, TBor notTB network, T. Bauer, A. Prasse, J. Müller-Quernheim, S.H.E. Kaufmann: Common patterns and disease-related signatures in tuberculosis and sarcoidosis.
Proc. Natl. Acad. Sci. 109: 7853-7858 (2012). <https://doi.org/10.1073/pnas.1121072109>

Dorhoi, A., M. Iannaccone, M. Farinacci, K.C. Faé, J. Schreiber, P. Moura-Alves, H.-J. Mollenkopf, D. Oberbeck-Mueller, S. Jörg, E. Heinemann, K. Hahnke, F. Del Nonno, D. Goletti, R. Capparelli, S.H.E. Kaufmann: MicroRNA miR-223 controls susceptibility to tuberculosis by regulating lung neutrophil recruitment. *J. Clin. Invest.* 123:4836-4848 (2013)
<https://doi.org/10.1172/jci67604>

Nouailles, G., A. Dorhoi, M. Koch, J. Zerrahn, J. Weiner 3rd, Fae, K., F. Arrey, P. Moura-Alves, S. Kuhlmann, S. Bandermann, D. Loewe, H.-J. Mollenkopf, A. Vogezaang, C. Meyer-Schwersinger, H.-W. Mittrücker, S.H.E. Kaufmann: CXCL5/LIX-secreting pulmonary epithelial cells drive destructive neutrophilic inflammation in tuberculosis. *J. Clin. Invest.* 24(3):1268-1282 (2014)
<https://doi.org/10.1172/jci72030>

Vogelzang, A., C. Perdomo, U. Zedler, S. Kuhlmann, R. Hurwitz, M. Gengenbacher, S.H.E. Kaufmann: Central memory CD4 T cells are responsible for superior protection against tuberculosis of the recombinant Bacillus Calmette-Guérin Δ ureC::hly vaccine. *J. Infect. Dis.* 210(12):1928-1937 (2014)
<https://doi.org/10.1093/infdis/jiu347>

Feng, Y., A. Dorhoi, H-J. Mollenkopf, H. Yin, Z. Dong, L. Mao, J. Zhou, A. Bi, S. Weber, J. Maertzdorf, G. Chen, Y. Chen, S.H.E. Kaufmann: Platelets direct monocyte differentiation into epithelioid-like multinucleated giant foam cells with suppressive capacity upon mycobacterial stimulation.
J. Infect. Dis. 210(11): 1700-1710 (2014). <https://doi.org/10.1093/infdis/jiu355>

Moura-Alves, P., K.C. Fae, E. Houthuys, A. Dorhoi, A. Kreuchwig, J. Furkert, N. Barison, A. Diehl, A. Munder, P. Constant, T. Skrahina, U. Guhlich-Bornhof, M. Klemm, A.-B. Koehler, S. Bandermann, C. Goosmann, H.-J. Mollenkopf, R. Hurwitz, V. Brinkmann, S. Fillatreau, M. Daffe, B. Tümler, M. Kolbe, H. Oschkinat, G. Krause, S.H.E. Kaufmann: AhR sensing of bacterial pigments regulates antibacterial defence. *Nature* 512(7515):387-392 (2014). <https://doi.org/10.1038/nature13684>
(Highlighted in News & Views, Nature 512: 377-378 (13 August 2014). doi:10.1038/nature13741)

Duque-Correa, M.A., A. Kühl, P.C. Rodriguez, U. Zedler, S. Schommer-Leitner, M. Rao, J. Weiner 3rd, R. Hurwitz, J.E: Qualls, G.A. Kosmiadi, P.J. Murray, S.H.E. Kaufmann, S.T. Reece. Macrophage arginase-1 controls bacterial growth and pathology in hypoxic tuberculosis granulomas. *Proc. Natl. Acad. Sci. USA* 111(38):E4024-E432 (2014)
<https://doi.org/10.1073/pnas.1408839111>

Gengenbacher, M., A. Vogelzang, S. Schuerer, D. Lazar, P. Kaiser, S.H.E. Kaufmann: Dietary pyridoxine controls efficacy of vitamin B6-auxotrophic tuberculosis vaccine bacillus Calmette-Guérin ΔureC::hly Δpdx1 in mice. *mBio* 5(3): e01262-14 (2014)
<https://doi.org/10.1128/mbio.01262-14>

Maertzdorf, J., S. Tian, J. Weiner 3rd, G. McEwen, E. Lader, U. Schriek, J. Kenneth, S.H.E. Kaufmann: Concise gene signature for point-of-care classification of tuberculosis. *EMBO Mol. Med.* 8(2): 86-95 (2015)
<https://doi.org/10.15252/emmm.201505790>

Saiga, H., N. Nieuwenhuizen, M. Gengenbacher, A.-B. Koehler, S. Schuerer, P. Moura-Alves, I. Wagner, H.-J. Mollenkopf, A. Dorhoi, S.H.E. Kaufmann: The recombinant BCG ΔureC::hly vaccine targets the AIM2 inflammasome to induce autophagy and inflammation. *J. Infect. Dis.* 211(11):1831-1841 (2015). <https://doi.org/10.1093/infdis/jiu675>

Zak, D., A. Penn-Nicholson, T.J. Scriba, E. Thompson, S. Suliman, L.M. Amon, H. Mahomed, M. Erasmus, W. Whatney, G.D. Hussey, D. Abrahams, F. Kafaar, T. Hawkridge, S. Verver, E.J. Hughes, M. Ota, J. Sutherland, R. Howe, H.M. Dockrell, W. H. Boom, B. Thiel, T.H.M. Ottenhoff, H. Mayanja-Kizza, A.C. Crampin, K. Downing, M. Hatherill, J. Valvo, S. Shankar, S.K. Parida, S.H.E. Kaufmann, G. Walzl, A. Aderem, W.A. Hanekom for other members of the ACS[§] and GC6-74[†] cohort study team: A blood RNA signature for tuberculosis disease risk: a prospective cohort study. *Lancet* 387(10035):2312-22 (2016). [https://doi.org/10.1016/s0140-6736\(15\)01316-1](https://doi.org/10.1016/s0140-6736(15)01316-1)

Kupz, A., U. Zedler, M. Stäber, C. Perdomo, A. Dorhoi, R. Brosch, S.H.E. Kaufmann: ESAT-6-dependent cytosolic pattern recognition drives noncognate tuberculosis control in vivo. *J Clin Invest* 126(6):2109-2122. doi:10.1172/JCI84978 (2016)
<https://doi.org/10.1172/jci84978>

Gengenbacher, M., N. Nieuwenhuizen, A. Vogelzang, H. Liu, P. Kaiser, S. Schuerer, D. Lazar, I. Wagner, H.-J. Mollenkopf, S.H.E. Kaufmann: Deletion of *nuoG* from the vaccine candidate *Mycobacterium bovis* BCG ΔureC::hly improves protection against tuberculosis. *mBio*, 7(3): e00679-16. doi:10.1128/mBio.00679-16 (2016)
<https://doi.org/10.1128/mbio.00679-16>

Kaufmann, S.H.E., A. Dorhoi, R.S. Hotchkiss and R. Bartenschlager: Host-directed therapy for bacterial and viral infections. *Nat. Rev. Drug Discov.*, doi:10.1038/nrd.2017.162 (2017)
<https://doi.org/10.1038/nrd.2017.162>

Beigier-Bompadre, M., G.N. Montagna, A.A. Kühl, L. Lozza, J. Weiner III, A. Kupz, A. Vogelzang, H.-J. Mollenkopf, D. Löwe, S. Bandermann, A. Dorhoi, V. Brinkmann, K. Matuschewski, S.H.E. Kaufmann: *Mycobacterium tuberculosis* Infection Modulates Adipose Tissue Biology. *PLoS Pathog* 13(10): e1006676. doi.org: 10.1371 (2017) <https://doi.org/10.1371/journal.ppat.1006676>

Pei, G., H. Buijze, H. Liu, P. Moura-Alves, C. Goosmann, V. Brinkmann, H. Kawabe, A. Dorhoi, S.H.E. Kaufmann: The E3 ubiquitin ligase Nedd4 enhances killing of membrane-perturbing intracellular bacteria by promoting autophagy. *Autophagy*, 13(12):2041-2055 (2017) <https://doi.org/10.1080/15548627.2017.1376160>

Suliman, S., E. Thompson, J. Sutherland, J. Weiner 3rd, M.O.C. Ota, S. Shankar, A. Penn-Nicholson, B. Thiel, M. Erasmus, J. Maertzdorf, F.J. Duffy, P.C. Hill, E.J. Hughes, K. Stanley, K. Downing, M.L. Fisher, J. Valvo, S.K. Parida, G. van der Spuy, G. Tromp, J.M.O. Adetifa, S. Donkor, R. Howe, H. Mayanja-Kizza, W.H. Boom, H. Dockrell, T.H.M. Ottenhoff, M. Hatherill, A. Aderem, W.A. Hanekom, T.J. Scriba*, S.H.E. Kaufmann*, D.E. Zak*, G. Walzl*, and the GC6-74 and ACS[§] cohort study groups: Four-gene pan-African blood signature predicts progression to tuberculosis. *Am J Respir Crit Care Med.* 197(9): 1198-1208 , (2018). DOI: [10.1164/rccm.201711-2340OC](https://doi.org/10.1164/rccm.201711-2340OC)
* equal senior authorship
(Highlighted in Am J Respir Crit Care Med. 197(9): 1106–110 (2018). DOI: [10.1164/rccm.201803-0469ED](https://doi.org/10.1164/rccm.201803-0469ED))

Weiner 3rd, J., J. Maertzdorf, J.S. Sutherland, F. Duffy, E. Thompson, S. Suliman, G. McEwen, B. Thiel, S.K. Parida, J. Zyla, W.A. Hanekom, R.P. Mohney, W.H. Boom, H. Mayanja-Kizza, R. Howe, H.M. Dockrell, T.H.M. Ottenhoff, T.J. Scriba, D.E. Zak, G. Walzl, S.H.E. Kaufmann and the GC6-74 Consortium: Metabolite changes in blood predict the onset of tuberculosis. *Nat. Commun.* 9: 5208 (2018). DOI: [10.1038/s41467-018-07635-7](https://doi.org/10.1038/s41467-018-07635-7)

Lozza, L., P. Moura-Alves, T. Domaszewska, C. Lage Crespo, I. Streata , A. Kreuchwig, M. Bechtle, M. Klemm, U. Zedler, S. Ungureanu Bogdan, U. Guhlich-Bornhof, A.-B. Koehler, M. Stäber, H.-J. Mollenkopf, R. Hurwitz, J. Ferkert, G. Krause, J. Weiner 3rd, A. Jacinto, I. Mihai, M. Leite-de-Moraes, F. Siebenhaar, M. Maurer, and S.H.E. Kaufmann: The Henna pigment Lawsone activates the Aryl Hydrocarbon Receptor and impacts skin homeostasis. *Sci. Rep.* 9:10878 (2019). DOI: [10.1038/s41598-019-47350-x](https://doi.org/10.1038/s41598-019-47350-x)

P. Moura-Alves, A. Puyskens, A. Stinn, M. Klemm, U. Guhlich-Bornhof, A. Dorhoi, J. Ferkert, A. Kreuchwig, J. Protze, L. Lozza, G. Pei, P. Saikali, C. Perdomo, H.-J. Mollenkopf, R. Hurwitz, F. Kirschhoefer, G. Brenner-Weiss, J. Weiner 3rd, H. Oschkinat, M. Kolbe, G. Krause, and S.H.E. Kaufmann: Host monitoring of quorum sensing during *Pseudomonas aeruginosa* infection. *Science* 366 (6472), eaaw1629 (2019). DOI: [10.1126/science.aaw162](https://doi.org/10.1126/science.aaw162)
(Highlighted in: Minton, K. Intercepting bacterial communications. *Nat Rev Immunol* (2020). DOI: [10.1038/s41577-020-0278-5](https://doi.org/10.1038/s41577-020-0278-5))

Puyskens, A., A. Stinn, M. van der Vaart, A. Kreuchwig, J. Protze, G. Pei, M. Klemm, U. Guhlich, R. Hurwitz, G. Krishnamoorthy, M. Schaaf, G. Krause, A. H. Meijer, S.H.E. Kaufmann* and P. Moura-Alves*: Concomitant AhR sensing of infection and therapy impacts host defense and treatment efficacy in tuberculosis. *Cell Host Microbe* 27 (2): 238-248.e7 (2020). DOI: [10.1016/j.chom.2019.12.005](https://doi.org/10.1016/j.chom.2019.12.005)
* equal senior authorship

Pei, G., J. Zyla, L. He, P. Moura-Alves, H. Steinle, P. Saikali, L. Lozza, N. Nieuwenhuizen, J. Weiner, H.-J. Mollenkopf, K. Ellwanger, C. Arnold, M. Duan, Y. Dagil, M. Pashenkov, I. Gomperts Boneca, T.A. Kufer, A. Dorhoi, and S.H.E. Kaufmann: Cellular stress promotes NOD1/2-dependent inflammation via the endogenous metabolite sphingosine-1-phosphate. *EMBO J.*, e106272 (2021). DOI: [10.15252/embj.2020106272](https://doi.org/10.15252/embj.2020106272)
(Highlighted in: Lu, Y. and Neculai D. Sphingosine-1-phosphate: The missing link between NOD1/2 and ER stress. *EMBO J.* (2021). DOI: [10.15252/embj.2021108812](https://doi.org/10.15252/embj.2021108812))

Cotton, M.F., S.A. Madhi, A.K. Luabeya, M. Tameris, A.C. Hesseling, J. Shenje, E. Schoeman, M. Hatherill, S. Desai, D. Kapse, S. Brückner, A. Koen, L. Jose, A. Moultrie, S. Bhikha, G. Walzl, A. Gutschmidt, L.A. Kotze, D.L. Allies, A.G. Loxton, U. Shaligram, M. Abraham, H. Johnstone, L. Grode, S.H.E. Kaufmann, and P.S. Kulkarni: Safety and immunogenicity of VPM1002 versus BCG in South African newborn babies: a randomised, phase 2 non-inferiority double-blind controlled trial. *Lancet Infect. Dis.* (2022). DOI: [10.1016/S1473-3099\(22\)00222-5](https://doi.org/10.1016/S1473-3099(22)00222-5)
(Highlighted in: Dockrell, H.M.: A next generation BCG vaccine moves forward. *Lancet Infect. Dis.* (2022). DOI: [10.1016/S1473-3099\(22\)00287-0](https://doi.org/10.1016/S1473-3099(22)00287-0))

Blossey, A.M., S. Brückner, M. May, G.P. Parzmair, H. Sharma, U. Shaligram, L. Grode, S.H.E. Kaufmann, M.G. Netea and C. Schindler: VPM1002 as Prophylaxis Against Severe Respiratory Tract Infections Including COVID-19 in the Elderly: a phase III randomised, double-blind, placebo-controlled, multicenter clinical study. *Clin. Infect. Dis.* 76: 1304-1310 (2022). DOI: [10.1093/cid/ciac881](https://doi.org/10.1093/cid/ciac881)