

10 selected publications (original publications & reviews)

Kroll, J., Hauschild, R., Kuznetsov, A., Stefanowski, K., Hermann, M.D., Merrin, J., Shafeek, L., Müller-Taubenberger, A., **Renkawitz, J.*** (2023). Adaptive Pathfinding by Nucleokinesis during Amoeboid Migration. *EMBO Journal*, e114557. 10.15252/embj.2023114557.

Holtkamp, S.J., Ince, L.M., Barnoud, C., Schmitt, M.T., Sinturel, F., Pilorz, V., Pick, R., Jemelin, S., Mühlstädt, M., Boehncke, W.-H., Weber J., Laubender D., Philippou-Massier J., Chen C.S., Holtermann L., Vestweber D., Sperandio M., Schraml B., Halin C., Dibner C., Oster H., **Renkawitz J.**, Scheiermann C. (2021). Circadian clocks guide dendritic cells into skin lymphatics. *Nature Immunology* 1–7.

Kameritsch, P., **Renkawitz, J.** (2020). Principles of Leukocyte Migration Strategies. *Trends in Cell Biology* 30, 818–832.

Renkawitz, J.*, Kopf, A., Stopp, J., Vries, I. de, Driscoll, M.K., Merrin, J., Hauschild, R., Welf, E.S., Danuser, G., Fiolka, R., Sixt, M.*. (2019). Nuclear positioning facilitates amoeboid migration along the path of least resistance. *Nature* 568, 546–550.

Hons, M., Kopf, A., Hauschild, R., Leithner, A., Gaertner, F., Abe, J., **Renkawitz, J.**, Stein, J.V., Sixt, M. (2018). Chemokines and integrins independently tune actin flow and substrate friction during intranodal migration of T cells. *Nature Immunology* 19, 606–61.

Lademann, C.A., **Renkawitz, J.**, Pfander, B., and Jentsch, S. (2017). The INO80 Complex Removes H2A.Z to Promote Presynaptic Filament Formation during Homologous Recombination. *Cell Reports* 19, 1294–1303.

Renkawitz, J., Lademann, C.A., and Jentsch, S. (2014). Mechanisms and principles of homology search during recombination. *Nature Reviews Molecular Cell Biology* 15, 369–383.

Renkawitz, J., Lademann, C.A., Kalocsay, M., and Jentsch, S. (2013). Monitoring homology search during DNA double-strand break repair in vivo. *Molecular Cell* 50, 261–272.

Renkawitz, J., and Sixt, M. (2010). Mechanisms of force generation and force transmission during interstitial leukocyte migration. *EMBO Reports* 11, 744–750.

Renkawitz, J., Schumann, K., Weber, M., Lämmermann, T., Pflücke, H., Piel, M., Polleux, J., Spatz, J.P., Sixt, M. (2009). Adaptive force transmission in amoeboid cell migration. *Nature Cell Biology* 11, 1438–1443.

Original publications

Kroll, J., Hauschild, R., Kuznetsov, A., Stefanowski, K., Hermann, M.D., Merrin, J., Shafeek, L., Müller-Taubenberger, A., **Renkawitz, J.*** (2023). Adaptive Pathfinding by Nucleokinesis during Amoeboid Migration. *EMBO Journal*, e114557. 10.15252/embj.2023114557.

Ishikawa-Ankerhold, H., Kroll, J., Heuvel, D. van den, **Renkawitz, J.**, Müller-Taubenberger, A. (2022). Centrosome Positioning in Migrating Dictyostelium Cells. *Cells* 11, 1776.

Holtkamp, S.J., Ince, L.M., Barnoud, C., Schmitt, M.T., Sinturel, F., Pilorz, V., Pick, R., Jemelin, S., Mühlstädt, M., Boehncke, W.-H., Weber J., Laubender D., Philippou-Massier J., Chen C.S., Holtermann L., Vestweber D., Sperandio M., Schraml B., Halin C., Dibner C., Oster H., **Renkawitz J.**, Scheiermann C. (2021). Circadian clocks guide dendritic cells into skin lymphatics. Nature Immunology 1–7.

Kopf, A., **Renkawitz, J.**, Hauschild, R., Girkontaite, I., Tedford, K., Merrin, J., Thorn-Seshold, O., Trauner, D., Häcker, H., Fischer, K.-D., et al. (2020). Microtubules control cellular shape and coherence in amoeboid migrating cells. The Journal of Cell Biology 219

Renkawitz, J.*, Kopf, A., Stopp, J., Vries, I. de, Driscoll, M.K., Merrin, J., Hauschild, R., Welf, E.S., Danuser, G., Fiolka, R., Sixt, M.*. (2019). Nuclear positioning facilitates amoeboid migration along the path of least resistance. Nature 568, 546–550.

Leithner, A., **Renkawitz, J.**, Vries, I. de, Hauschild, R., Häcker, H., Sixt, M. (2018). Fast and efficient genetic engineering of hematopoietic precursor cells for the study of dendritic cell migration. European Journal of Immunology 48, 1074–1077

Frick, C., Dettinger, P., **Renkawitz, J.**, Jauch, A., Berger, C.T., Recher, M., Schroeder, T., Mehling, M. (2018). Nano-scale microfluidics to study 3D chemotaxis at the single cell level. PLoS ONE 13, e0198330.

Hons, M., Kopf, A., Hauschild, R., Leithner, A., Gaertner, F., Abe, J., **Renkawitz, J.**, Stein, J.V., Sixt, M. (2018). Chemokines and integrins independently tune actin flow and substrate friction during intranodal migration of T cells. Nature Immunology 19, 606–61.

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Renkawitz, J., Schumann, K., Weber, M., Lämmermann, T., Pflücke, H., Piel, M., Polleux, J., Spatz, J.P., Sixt, M. (2009). Adaptive force transmission in amoeboid cell migration. Nature Cell Biology 11, 1438–1443.

Lämmermann, T., **Renkawitz, J.**, Wu, X., Hirsch, K., Brakebusch, C., Sixt, M. (2009). Cdc42-dependent leading edge coordination is essential for interstitial dendritic cell migration. Blood 113, 5703–5710.

Geiger, S.R., Kuhn, C.D., Leidig, C., **Renkawitz, J.**, Cramer, P. (2008). Crystallization of RNA polymerase I subcomplex A14/A43 by iterative prediction, probing and removal of flexible regions. Acta Crystallographica. Section F, Structural Biology and Crystallization Communications 64, 413–418.

Mertins, P., Eberl, H.C., **Renkawitz, J.**, Olsen, J.V., Tremblay, M.L., Mann, M., Ullrich, A., and Daub, H. (2008). Investigation of protein-tyrosine phosphatase 1B function by quantitative proteomics. Molecular & Cellular Proteomics: MCP 7, 1763–1777.

Reviews

Kameritsch, P., **Renkawitz, J.** (2020). Principles of Leukocyte Migration Strategies. Trends in Cell Biology 30, 818–832.

Renkawitz, J., Lademann, C.A., and Jentsch, S. (2014). Mechanisms and principles of homology search during recombination. Nature Reviews Molecular Cell Biology 15, 369–383.

Renkawitz, J., Lademann, C.A., and Jentsch, S. (2013). γ H2AX spreading linked to homology search. Cell Cycle 12, 2526–2527.

Renkawitz, J., and Sixt, M. (2010). Mechanisms of force generation and force transmission during interstitial leukocyte migration. EMBO Reports 11, 744–750.

Guidelines & protocols

Kroll, J., Ruiz-Fernandez, M.J.A., Braun, M.B., Merrin, J., **Renkawitz, J.** (2022). Quantifying the Probing and Selection of Microenvironmental Pores by Motile Immune Cells. Current Protocols 2, e407.

Clausen, B.E.#, Amon, L., Backer, R.A., Berod, L. #, Bopp, T., Brand, A., Burgdorf, S. #, Chen, L., Da, M., Distler, U. #, Dress R.J., Dudziak D. #, Dutertre C., Eich C., Gabele A., Geiger M., Ginhoux F. #, Giusiano L., Godoy G.J., Hamouda A.E.I., Hatsch L., Heger L., Heidkamp G.F., Hernandez L.C., Jacobi L., Kaszubowski T., Kong W.T., Lehmann C.H.K., López-López T., Mahnke K. #, Nitsche D., **Renkawitz J. #**, Reza R.A., Sáez P.J. #, Schlautmann L., *Schmitt M.T.*, Seichter A., Sielaff M., Sparwasser T., Stoitzner P., Tchitashvili G., Tenzer S. #, Tochoedo N.R., Vurnek D., Zink F., and Hieronymus T#. (2022). Guidelines for mouse and human DC functional assays. European Journal of Immunology doi: 10.1002/eji.202249925

section lead authors

Renkawitz, J., Reversat, A., Leithner, A., Merrin, J., and Sixt, M. (2018). Micro-engineered “pillar forests” to study cell migration in complex but controlled 3D environments. Methods in Cell Biology 147, 79–91.

Editorials

Renkawitz, J., Donnadieu, E., Moreau, H.D. (2022). Editorial: Immune Cell Migration in Health and Disease. Frontiers in Immunology 13, 897626.

Mogessie, B., Zenner, H., **Renkawitz, J.** (2019). Meeting report - Cell dynamics: organelle-cytoskeleton interface. Journal of Cell Science 132, jcs236679.

Renkawitz, J., and Sixt, M. (2016). A Radical Break: Restraining Neutrophil Migration. Developmental Cell 38, 448–450.

Renkawitz, J., and Sixt, M. (2016). Formin' a Nuclear Protection. Cell 167, 1448–1449.