

20 most Significant papers selected from a career total of 316 publications, generating an h-index = 108 from > 41,850 citations with 36 high-impact papers in *Nature* (2), *Science* (2), *Cell* and their daughter journals (32), most as senior PI. His Trainees are shown underlined, citations are from Google Scholar.

1. * Grin, P.M., Baid, K., Cesar Ramos de Jesus, H., Kozarc, N., Bell, P.A., Jiang, S.Z., Kappelhoff, R., Butler, G.S., Leborgne, N.G.F., Pan, C., Pablos, I., Macchado, Y., Vederas, J.C., Kim, H., Banerjee, A., and **Overall, C.M.** 2024. SARS-CoV-2 3CL^{pro} (main protease) Regulates Caspase Activation of Gasdermin-D/E Pores Leading to Secretion and Extracellular Activity of 3CL^{pro}. **Cell Reports** **43**, 115080, <https://doi.org/10.1016/j.celrep.2024.115080>.
2. * Butler, G.S., Vlok, M., Cesar Ramos de Jesus, H., Kaushal B., Machado, Y., Pablos, I.M., Solis, N., Kappelhoff, R., Bell, P.A., Nore, L., Grin, P., Nguyen, J.P., Cao, Q.T., Lamar, T., Vuong, W., Webster, S.J., Vederas, J.C., Hirota, J.A., Banerjee, A., Jan, E., and **Overall, C.M.** 2025. SARS-CoV-2 Main Protease, 3CL^{pro}, Drives Cytoskeletal Reorganization and Tunnelling Nanotube Formation for Stealth Intercellular Infection. **Nature Communications**, conditional acceptance. <https://doi.org/10.21203/rs.3.rs-3918469/v1>.
3. * Pablos, I., Machado, Y., de Jesus, H.C.R., Mohamud, Y., Kappelhoff, R., Lindskog, C., Vlok, M., Bell, P.A., Butler, G.S., Grin, P.M., Cao, Q.T., Nguyen, J.P., Solis, N., Abbina, S., Rut, W., Vederas, J.C., Szekely, L., Szakos, A., Drag, M., Kizhakkedathu, J., Mossman, K., Hirota, J., Jan, E., Lou, H., Banerjee, A., and **Overall, C.M.** 2021. Mechanistic Insights into COVID-19 by Global Analysis of the SARS-CoV-2 3CL^{pro} Substrate Degradome. **Cell Reports** **37**, Oct 26;37(4):109892. doi: 10.1016/j.celrep.2021.109892.
Citations as of Sep. 21, 2024: **81**
4. * Klein, T., Fung, S.Y., Renner, F., Blank, M.A., Dufour, A., Kang, S., Bolger-Munro, M., Scurll, J.M., Priatel, J.J., Schweigler, P., Melkko, S., Gold, M.S., Viner, R.I., Régnier, C.H., Turvey, S.E., and **Overall, C.M.** 2015. The Paracaspase MALT1 Cleaves HOIL1 Reducing Linear Ubiquitination by LUBAC to Dampen Lymphocyte NF-κB Signalling. **Nature Communications** **6**, 8777, 1 – 17. doi:10.1038/ncomms9777. *Featured Article and Featured in Nature Immunology; Highlighted by Faculty of 1000 as a high-significance paper.*
Citations as of Sep. 21, 2024: **164**
5. * Quancard, J., Klein, T., Fung, S-Y., Renatus, M., Hughes, N., Israël, L., Priatel, J.J., Kang, S., Blank, M.A., Viner, R.I., Blank, J., Schlapbach, A., Erbel, P., Kizhakkedathu, J., Villard, F., Hersperger, R., Turvey, S.E., Eder, J., Bornancin, F., and **Overall, C.M.** 2019. An Allosteric MALT1 Inhibitor is a Molecular Corrector Rescuing Function in an Immunodeficient Patient. **Nature Chemical Biology** **15**, 304 – 313. *Citations as of Sep. 21, 2024: 59*
6. * Marchant, D.J., Bellac, C., Moraes, T.J., Wadsworth, S.J., Dufour, A., Butler, G.S., Bilawchuk, L.M., Hendry, R.G., Robertson, A.G., Cheung, C.T., Ng, J., Ang, L., Luo, Z., Heilbron, K., Norris, M.J., Duan, W., Bucyk, T., Karpov, A., Devel, L., Georgiadis, D., Hegele, R.G., Luo, H., Granville, D.J., Dive, V., McManus, B.M., and **Overall, C.M.** 2014. A New Transcriptional Role for Matrix Metalloproteinase-12 in Antiviral Immunity. **Nature Medicine** **20**, 493 – 502. doi: 10.1038/nm.3508. *Featured Article in News and Views.*
Citations as of Sep. 21, 2024: **264**
7. * Dufour, A., Bellac, C.L., Eckhard, U., Solis, N., Klein, T., Kappelhoff, R., Fortelny, N., Jobin, P., Rozmus, J., Mark, J., Pavlidis, P., Dive, V., Barbour, S.J., and **Overall, C.M.** 2018. C-Terminal Truncation of IFN-γ Inhibits Proinflammatory Macrophage Responses and is Deficient in Autoimmune Disease. **Nature Communications** **9**, 2416, 1 – 18. doi: 10.1038/s41467-018-04717-4. *Citations as of Sep. 21, 2024: 76*
8. * Eckhard, U., Bandukwala, H., Mansfield, M.J., Marino, G., Cheng, J., Wallace, I., Holyoak, T., Charles, T.C., Austin, J., **Overall, C.M.**[^], and Doxey, A.C.[^] 2017. Discovery of a Proteolytic Flagellin Family in Diverse Bacterial Phyla that Assembles Enzymatically Active Flagella. **Nature Communications** **8**, 521, 1 – 9. doi: 10.1038/s41467-017-00599-0. [^]*Joint Shared Senior Authors.*
Citations as of Sep. 21, 2024: **42**
9. * auf dem Keller, U., Prudova, A., Eckhard, U., Fingleton, B., and **Overall, C.M.** 2013. Systems-Level Analysis of Proteolytic Events in Increased Vascular Permeability and Complement Activation in Skin Inflammation. **Science Signalling** **6**: rs2, 1 – 15. doi: 10.1126/scisignal.2003512. **Featured cover.**

20 Most Significant Publications

Christopher M. Overall

Citations as of Sep. 21, 2024: 108

10. * Prudova, A., Gocheva, V., auf dem Keller, U., Eckhard, U., Olson, O., Akkari, L., Butler, G.S., Fortelny, N., Lange, P.F., Mark, J., Joyce, J., and **Overall, C.M.** 2016. TAILS N-Terminomics and Proteomics Show Protein Degradation Dominates Over Proteolytic Processing by Cathepsins in Pancreatic Tumors. **Cell Reports** **16**, 1,762 – 1,773. **Featured cover.** *Citations as of Sep. 21, 2024: 79*
11. * Zhang, K., McQuibban, G.A., Silva, C., Butler, G.S., Johnston, J.B., Holden, J., Clark-Lewis, I., **Overall, C.M.**[^], and Power, C.[^] 2003. HIV-Induced Metalloproteinase Processing of the Chemokine Stromal Cell Derived Factor-1 Causes Neurodegeneration. [^]*Joint Senior and Communicating Authors.* **Nature Neuroscience** **6**, 1064 – 1071. *Citations as of Sep. 21, 2024: 378*
12. * Bellac, C.L., Dufour, A., Krisinger, M.J., Loonchanta, A., Starr, A.E., auf dem Keller, U., Lange, P.F., Goebeler, V., Kappelhoff, R., Butler, G.S., Burnick, L.D., Conway, E.M., Roberts, C.R., and **Overall, C.M.** 2014. Macrophage Matrix Metalloproteinase-12 Dampens Inflammation and Neutrophil Influx in Arthritis. **Cell Reports** **9**, 618 – 632. *Citations as of Sep. 21, 2024: 108*
13. * Fortelny, N., Cox, J.H., Kappelhoff, R., Starr, A.E., Lange, P.F., Pavlidis, P., and **Overall, C.M.** 2014. Network Analyses Reveal Pervasive Functional Regulation Between Proteases in the Human Protease Web. **PLoS Biology** **12**, e1001869. doi: 10.1371/journal.pbio.1001869. **Featured Weekly Editors Pick.** *Citations as of Sep. 21, 2024: 178*
14. * Dean, R.A., Cox, J.H., Bellac, C.L., Doucet, A., Starr, A.E., and **Overall, C.M.** 2008. Macrophage-Specific Metalloelastase (MMP-12) Truncates and Inactivates ELR⁺ CXC Chemokines and Generates CCL2, 7, 8, and 13 Antagonists: Potential Role of the Macrophage in Terminating PMN Influx. **Blood** **112**, 3444 – 3453. *Citations as of Sep. 21, 2024: 297*
15. * McQuibban, G.A., Gong, J.-H., Tam, E., McCulloch, C.A.G., Clark-Lewis, I., and **Overall, C.M.** 2000. Inflammation Dampened by Gelatinase A Cleavage of Monocyte Chemoattractant Protein-3. **Science** **289**, 1202 – 1206. *Selected by the Faculty of 1000 Biology for its significance.* *Citations as of Sep. 21, 2024: 978*
16. * Huesgen, P.F., Lange, P.F., Rogers, L.D., Solis, N., Eckhard, U., Kleifeld, O., Goulas, T., Gomis-Rüth, F.X., and **Overall, C.M.** 2015. LysargiNase Mirrors Trypsin for Protein C-Terminal and Methylation-Site Identification. **Nature Methods** **12**, 55 – 58. *Citations as of Sep. 21, 2024: 156*
17. * Lange, P. and **Overall, C.M.** 2011. TopFIND, a Knowledgebase Linking Protein Termini with Function. **Nature Methods** **8**, 703 – 704. *Citations as of Sep. 21, 2024: 102*
18. * Schilling, O., Barré, O., Huesgen, P.F., and **Overall, C.M.** 2010. Proteome-Wide Analysis of Protein Carboxy Termini: C Terminomics. **Nature Methods** **7**, 508 – 511. *Featured in C&EN (Chemical & Engineering News).* *Citations as of Sep. 21, 2024: 165*
19. * Kleifeld, O., Doucet, A., auf dem Keller, U., Prudova, A., Schilling, O., Kainthan, R.K., Starr, A., Foster, L.J., Kizhakkedathu, J.N., and **Overall, C.M.** 2010. Isotopic Labelling of Terminal Amines in Complex Samples Identifies Protein N-Termini and Protease Cleavage Products. **Nature Biotechnology** **28**, 281 – 288. *Citations as of Sep. 21, 2024: 567*
20. * Schilling, O. and **Overall, C.M.** 2008. Proteome-Derived Database-Searchable Peptide Libraries for Identifying Protease Cleavage Sites. **Nature Biotechnology** **26**, 685-694. **Designated in the Exceptional Category by the Faculty of 1000 Biology for its significance.** *Citations as of Sep. 21, 2024: 445*