

20 Most Significant Publications

Christopher M. Overall

1. * 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. 1, 2023: 54*
2. * 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. 1, 2023: 147*
3. * 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. 1, 2023: 49*
4. * Bell, P.A., Scheuermann, S., Renner, F., Pan, C.L., Lu, H.Y., Turvey, S.E., Bornancin, F., Régnier, C.H., and Overall, C.M. 2022. Integrating Knowledge of Protein Sequence with Protein Function for the Prediction and Validation of New MALT1 Substrates. **Computational and Structural Biotechnology Journal** **20**, 4,717 – 4,732 *Citations as of Sep. 1, 2023: 5*
5. * 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. 1, 2023: 243*
6. * Dufour, A., Bellac, C.L., Eckhard, U., Solis, N., Klein, T., Kappelhoff, R., Fortelny, N., Jobin, P., Rozmus, J., Mark, J., Pavidis, 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. 1, 2023: 58*
7. * 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. 1, 2023: 37*
8. * 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. Citations as of Sep. 1, 2023: 102*
9. * 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. 1, 2023: 70*
10. * 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. 1, 2023: 363*
11. * 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., Burtnick, 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. 1, 2023: 103*

12. * 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. 1, 2023: **160**
13. * 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. 1, 2023: **272**
14. * 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. 1, 2023: **944**
15. * 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. 1, 2023: **139**
16. * Lange, P. and Overall, C.M. 2011. TopFIND, a Knowledgebase Linking Protein Termini with Function. **Nature Methods** **8**, 703 – 704.
Citations as of Sep. 1, 2023: **95**
17. * 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. 1, 2023: **157**
18. * 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. 1, 2023: **530**
19. * Eckhard, U., Huesgen, P.F., Schilling, O., Bellac, C.L., Butler, G.S., Cox, J.H., Dufour, A., Goebeler, V., Kappelhoff, R., auf dem Keller, U., Klein, T., Lange, P.L., Marino, G., Morrison, C.J., Prudova, A., Rodriguez, D., Starr, A.E., Wang, Y., and Overall, C.M. 2016. Active Site Specificity Profiling of the Matrix Metalloproteinase Family: Proteomic Identification of 4,300 Cleavage Sites by Nine MMPs Explored with Structural and Synthetic Peptide Cleavage Analyses. **Matrix Biology** **49**, 37 – 60.
Citations as of Sep. 1, 2023: **195**
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. 1, 2023: **418**