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Refereed Publications, 31 Dec 2025

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GIDEON DAVIES. Refereed† Publications

2026 Shaded

431.	Burchill, L., *et al.* Bridging a Gap in Marine Sulfur Cycling: Discovery of a D-Cysteinolic Acid Degradation Pathway *J Am Chem Soc.* **2025** *147*, 47934-47941 https://doi.org/10.1021/jacs.5c11066
430.	Sharma, M., Pudlo, N., Järvå, M., Kaur, A., John, A., Burchill, L., Lingford, J.P., Epa, R., Abayakoon, P., Scott, N.E., Turkenburg, J.P., Davies, G.J., Martens, E.C., Goddard-Borger, E.D., and Williams, S.J. Sulfoglycolysis sustains *Eubacterium rectale* in low-fiber diets *J Biol Chem.* **2025** *301*, Article 108320. https://doi.org/10.1016/j.jbc.2025.108320
429.	Ruijgrok, G., Offen, W.A., Pickles, I.B., Raju, D., Patsos, T., de Boer, C., Ofman, T., Rompa, J., van Oord, D., Dodson, E.J., Beekers, A., Voskuilen, T., Ferrari, M., Wu, L., Janssen, A.P.A., Codée, J.D.C., Howell, L., Davies, G.J., and Overkleeft, H.S. Bespoke activity-based probes reveal that the *Pseudomonas aeruginosa* endoglycosidase, PslG, is an endo-β-glucanase *J Am Chem Soc.* **2025** *147*, 8578–8586. https://doi.org/10.1021/jacs.4c16806
428.	Roth, C., Moroz, O.V., Miranda, S.A.D., Jahn, L., Blagova, E.V., Lebedev, A.A., Segura, D.R., Stringer, M.A., Friis, E.P., Davies, G.J., and Wilson, K.S. Structures of α-galactosaminidases from the CAZy GH114 family and homologs defining a new GH191 family of glycosidases *Acta Crystallogr.* **2025** *D81*, 234-251. https://doi.org/10.1107/S2059798325002864
427.	Radchenko, Y., Aerts, J.M.F.G., Davies, G.J., Codée, J.D.C., Overkleeft, H.S. (2025). Activity-Based Profiling of Retaining Glycosidases in Disease Diagnosis and Their Application in Drug Discovery. In Handbook of Experimental Pharmacology. (Berlin, Heidelberg: Springer Berlin Heidelberg), pp. 1-16. https://doi.org/10.1007/164_2025_743
426.	Pickles, I.B., Correa, T.L.R., Overkleeft, H.S., and Davies, G.J. Activity-based probes for dynamic characterisation of polysaccharide-degrading enzymes *Biochem. J.* **2025a** *482*, 939-954. https://doi.org/10.1042/bcj20253060
425.	Pickles, I.B., Chen, Y., Moroz, O., Brown, H.A., de Boer, C., Armstrong, Z., McGregor, N.G.S., Artola, M., Codée, J.D.C., Koropatkin, N.M., Overkleeft, H.S., and Davies, G.J. Precision activity-based α-amylase probes for dissection and annotation of linear and branched-chain starch degrading enzymes *Angew Chemie Int Ed.* **2025b** *e202415219*. https://doi.org/10.1002/anie.202415219
424.	Males, A., Moroz, O.V., *et al.* Expansion of the diversity of Dispersin scaffolds *Acta Crystallogr.* **2025** *D81*, 130-146. https://doi.org/10.1107/S205979832500110X
423.	Cairo, J.P.L.F., *et al.* Signal-strapping: a protein-sequence search method for the discovery of metalloproteins *Nature Commun.* **2025** *16*, Article number 9244. https://doi.org/10.1038/s41467-025-64309-x
422.	Burchill, L., Sharma, M., Soler, N.M., Goddard-Borger, E.D., Davies, G.J., and Williams, S.J. Structure, kinetics, and mechanism of *Pseudomonas putida* sulfoquinovose dehydrogenase, the first enzyme in the sulfoglycolytic Entner-Doudoroff pathway *Biochemical J.* **2025** *482*, 57-72. https://doi.org/10.1042/BCJ20240605

† Gideon Davies has 16 unrefereed book chapters that are not included in this list.

421.	Thaler, M., Ofman, T.P., Kok, K., Heming, J.J.A., Moran, E., Pickles, I., Leijs, A.A., an den Nieuwendijk, A.M.C.H.v., van den Berg, R.J.B.H.N., Ruijgrok, G., Armstrong, Z., Salgado-Benvindo, C., Ninaber, D.K., Snijder, E.J., van Boeckel, C.A.A., Artola, M., Davies, G.J., Overkleeft, H.S., and Hemert, M.J.v. Epi-cyclophellitol cyclosulfate, a mechanism-based ER α-glucosidase II inhibitor, blocks replication of SARS-CoV-2 and other coronaviruses *ACS Central Science*. **2024** *10*, 1594–1608. https://doi.org/10.1021/acscentsci.4c00506
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