

Jenny C. Mortimer

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PROFESSIONAL PREPARATION:

University of Bristol, UK	Biological Sciences	BSc(Hons)	2002
University of Exeter, UK	Bioinformatics	MRes	2003
University of Cambridge, UK	Plant Physiology	PhD	2008
University of Cambridge, UK	Plant Biochemistry/Bioenergy	Postdoc	2007-2013

APPOINTMENTS:

2021	Associate Professor, School of Agriculture, Food and Wine, Waite Research Institute, University of Adelaide, Australia
2021	Affiliate Staff Scientist, Environmental Genomics and Systems Biology Division, Biosciences Area, Lawrence Berkeley National Laboratory (LBNL), Berkeley, CA, USA
2020	Adjunct A/Prof, University of Adelaide, Australia
2019	Acting VP, Life Cycle, Economics & Agronomy Division, Joint BioEnergy Institute (JBEI)
2018-20	Career Staff Scientist, LBNL
2016-20	Deputy Vice-President of the Feedstocks Division, JBEI
2014-	Director of Plant Systems Biology, JBEI
2014-2018	Career Research Scientist, Biosciences Area, LBNL
2013-2014	FPR research fellow, RIKEN Yokohama, Japan.

SELECTED RECENT PUBLICATIONS (from more than 70 peer-reviewed publications)

#= joint first authors; *=corresponding author h-index = 30

- Silva TN, Thomas JB, Dahlberg J, Rhee SY*, **Mortimer JC*** (2021) Progress and challenges in sorghum biotechnology, a multi-purpose feedstock for the bioeconomy. In press,
- **Mortimer JC***, Gilliam M* (2022). SpaceHort: Redesigning Plants to Support Space Exploration and On-Earth Sustainability. Current Opin. Biotech (in press)
- Demirer G, Silva T, Jackson C, Thomas J, Ehrhardt E, Rhee S, **Mortimer JC***, Landry M (2021). Nanotechnology to advance CRISPR-Cas genetic engineering of plants. Nature Nanotech. 16:243-250.
- Cole B, Bergmann D, Blaby-Haas CE, Blaby IK, Bouchard KE, Brady SM, Ciobanu D, Coleman-Derr D, Leiboff S, **Mortimer JC**, Nobori T, Rhee SY, Schmutz J, Simmons BA, Singh AK, Sinha N, Vogel JP, O'Malley RC, Visel A, Dickel DE (2021) Plant single-cell solutions for energy and the environment. Communications Bio. 4:1-12
- Plant Cell Atlas Consortium*.....Ehrhardt DW, Birnbaum KD, Rhee SY (2021) Science Forum: Vision, challenges and opportunities for a Plant Cell Atlas. eLife, 10:e66877.
- Moore WM, Chan C, Ishikawa T, Rennie EA, Wipf HML, Benites V, Kawai-Yamada M, **Mortimer JC**, Scheller HV (2021). Reprogramming sphingolipid glycosylation is required for endosymbiont persistence in *Medicago truncatula*. Current Biol. 31:2374-2395
- Jing B, Ishikawa T, Soltis NE, Inada N, Liang Y, Murawska GM, Fang L, Anderberhan F, Pidatala R, Yu X, Baidoo EEK, Kawai-Yamada M, Loque D, Kliebenstein DJ, Dupree P, **Mortimer JC*** (2021). The *Arabidopsis thaliana* nucleotide sugar transporter GONST2 is a functional homolog of GONST1. Plant Direct, e00309. doi: 10.1002/pld3.309
- Gao Y, Lipton AS, Wittmer Y, Murray DT, **Mortimer JC*** (2020) A grass-specific cellulose-xylan interaction dominates in sorghum secondary cell walls. Nature Communications, 11:6081
- **Mortimer JC*** (2018) Plant synthetic biology could drive a revolution in biofuels and medicine. Experimental Biology and Medicine, 1535370218793890

- Sechet J, Htwe S, Urbanowicz B, O'Neill M, **Mortimer JC*** (2018) Suppressing Arabidopsis GGLT 1 affects growth by reducing the L-galactose content and borate cross-linking of rhamnogalacturonan II. *Plant J* 96:1036-1050
- Ishikawa T, Fang L, Rennie E, Sechet J, Yan J, Jing B, Moore W, Cahoon EB, Scheller HV, Kawai-Yamada M, **Mortimer JC*** (2018). GLUCOSAMINE INOSITOLPHOSPHORYLCERAMIDE TRANSFERASE1 (GINT1) is a GlcNAc-containing glycosylinositol phosphorylceramide glycosyltransferase. *Plant Physiology*. 177 (3), 938-952
- Laursen T, Stonebloom S, Pidatala VR, Birdseye D, Clausen M, **Mortimer JC**, Scheller H (2018). Bi-functional glycosyltransferases catalyze both extension and termination of pectic galactan oligosaccharides. *Plant J* 94 (2), 340-351.
- Simmons TJ[#], **Mortimer JC[#]**, Berandinelli O, Pöppler A-C, Brown SP, Azevedo E, Dupree R, Dupree P (2017). Folding of xylan onto cellulose fibrils in plant cell walls revealed by solid-state NMR. *Nature Comm.* 7: 13902.
- Fang L, Ishikawa T, Rennie E, Lao J, Baidoo EEK, Xu J, Demura T, Kawai-Yamada M, Scheller HV, **Mortimer JC*** (2016) Loss of a sphingolipid-specific mannosyltransferase induces plant immune responses and reduces crystalline cellulose content in Arabidopsis. *Plant Cell*, 28: 2991-3004.
- **Mortimer JC**, Faria-Blanc N, Yu X, Tryfona T, Sorieul M, Ng YZ, Zhang Z, Stott K, Anders N, Dupree P (2015) An unusual xylan in Arabidopsis primary cell walls is synthesised by GUX3, IRX9L, IRX10L and IRX14. *Plant J*, 83:413-426
- **Mortimer JC**, Yu X, Albrecht S, Sicilia F, Huichalaf M, Ampuero D, Murphy AM, Matsunga T, Michaelson L, Kurz S, Stephens E, Baldwin TC, Ishii T, Napier J, Weber APM, Handford MG, Dupree P (2013) Abnormal glycosphingolipid mannosylation triggers salicylic-acid mediated responses in Arabidopsis. *Plant Cell*, 25: 1881-1894.

SYNERGISTIC ACTIVITIES (Selected):

1) Awards and Honors: World Economic Forum (WEF) Young Scientist (2016-2017); Treherne Scholar (2005-2007) and Frank Smart Scholar (2004-2006) University of Cambridge.

2) Outreach and Education: Cambridge Science festival (2006-2012), Fascination of Plants Day UK (2012), National Institute of Botany Key Challenge Event (2013), RIKEN Yokohama open day (2014), JBEI outreach committee (2015-), National Lab Science Day in Congress (2016). Co-author of WEF “Code of Ethics for Researchers”, invited speaker at AAAS Policy Forum (2018), BioTech Partners BRAVO judge (2018-), Primary/high School visits; Graduate and undergraduate teaching (University of Adelaide, University of Cambridge, University of California Berkeley, and University of California Davis). Supervised high school, undergraduate, and graduate students (masters/PhD), & postdocs.

3) Positions and Consortia Membership: IMER Committee Faculty Representative (2021-), Plant Cell Atlas Core Member (2021), Co-PI EcoPOD program (2017-02), UK BBSRC BioEnergy Centre (BSBEC) (2010-2013), RENEWALL (EU-funded academic-industrial network; improving plant cell walls for use as a renewable industrial feedstock, 2008-2012) and SUNLIBB (Brazil-EU funded Sustainable Liquid Biofuels from Biomass and Biorefining, 2013), JBEI Research Committee (2016-20), JBEI Tech Transfer Committee (2016-20), LBNL Conflict of Interest Committee (2019-20), LBNL Diversity, Equity and Inclusion team (2019-20), ASPB Women in Plant Biology Committee (2020-).

4) Editorial and Review activities: Editor, *Plant Cell Physiology* (2020-), Associate Editor, *Plant Methods* (2017-20), BBSRC, DFG, NSF ad hoc reviewer, JGI gene synthesis panel reviewer (annual, 2016-2020), EMSL panel reviewer (bi-annual 2015-2020) and EMSL panel co-chair (2019). Reviewer: *Nature Biotech*, *PNAS*, *Plant Cell*, *Nature Communications*, *Current Opinion in Plant Biology*, *Plant Physiology*, *Plant Journal*, *Frontiers in Plant Sciences*, *Biotechnology for Biofuels*, *Journal of Experimental Botany*, and many more.