Supplementary material

Cellular level chemical changes in Scots pine heartwood during incipient brown rot decay

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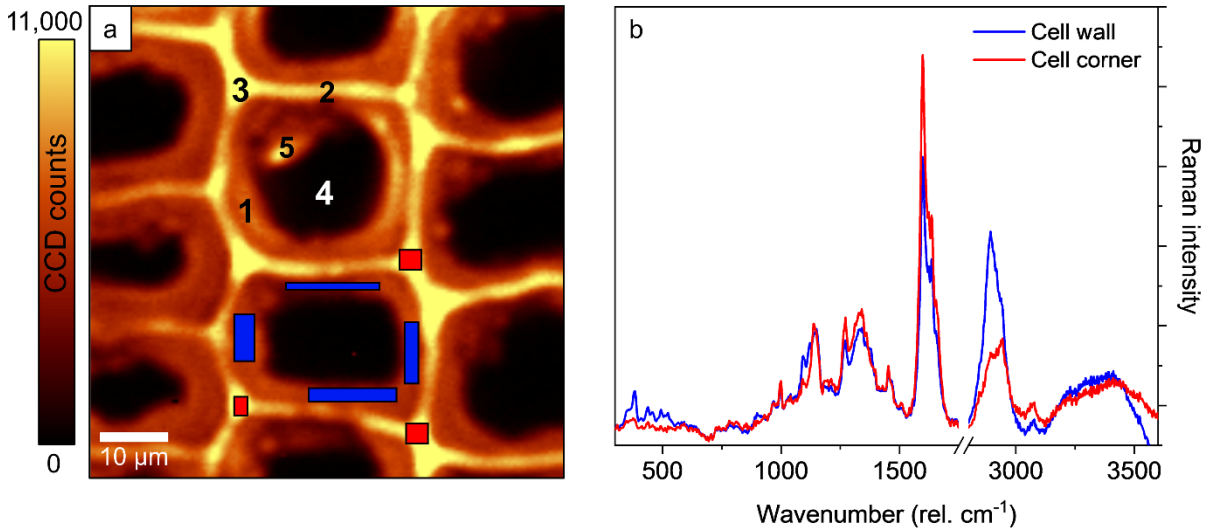
Supplementary Table S1. Extractive composition of Scots pine heartwood over 8 weeks of degradation by *R. placenta* (mg/g oven dry wood). PS, pinosylvin; PSM, pinosylvin monomethyl ether; RA 1-8, resin acids 1-8

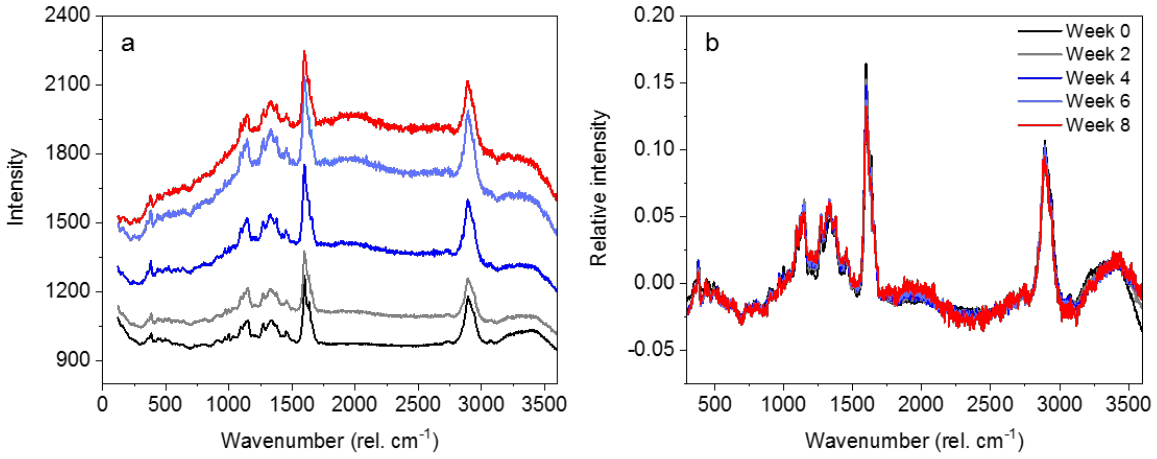
	Week 0	**Week 2**	**Week 4**	**Week 6**	**Week 8**
PS	7.7	5.3	3.7	3.3	1.7
PSM	11.2	7.9	6.0	5.4	2.6
RA 1	8.8	9.2	8.0	7.6	7.9
RA 2	1.3	1.4	0.0	0.0	0.0
RA 3	2.2	2.4	2.1	1.9	2.1
RA 4	15.2	15.7	13.9	13.0	13.3
RA 5	17.1	18.8	15.0	12.7	13.7
RA 6	11.4	12.4	11.0	11.0	10.8
RA 7	14.2	13.0	12.3	11.3	11.8
RA 8	11.5	11.6	10.2	9.2	9.8

Supplementary Table S2. Klason lignin and carbohydrate monomer composition of Scots pine heartwood over 8 weeks of degradation by *R. placenta* (mg/g extractives-free wood)

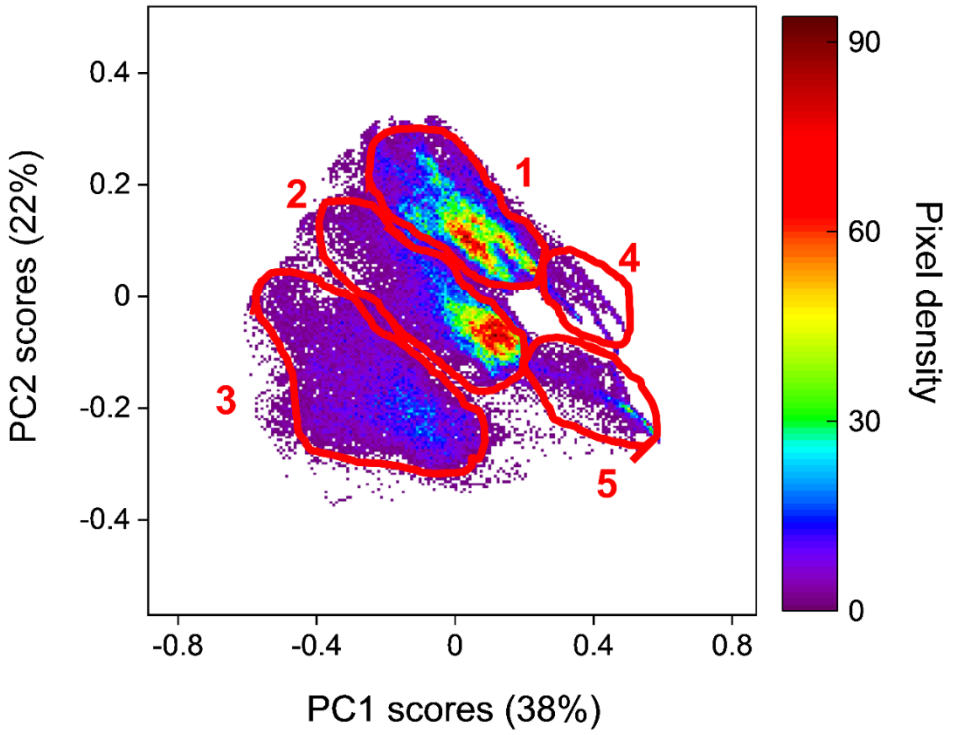
	Week 0	**Week 2**	**Week 4**	**Week 6**	**Week 8**
Lignin	270.2	270.0	271.7	274.3	284.4
Arabinose	19.5	19.1	18.1	16.9	15.8
Galactose	19.3	18.4	17.0	16.6	14.9
Glucose	476.4	480.5	477.2	473.9	464.7
Xylose	71.1	71.3	67.6	68.6	64.2
Mannose	118.7	111.1	112.2	110.9	107.4



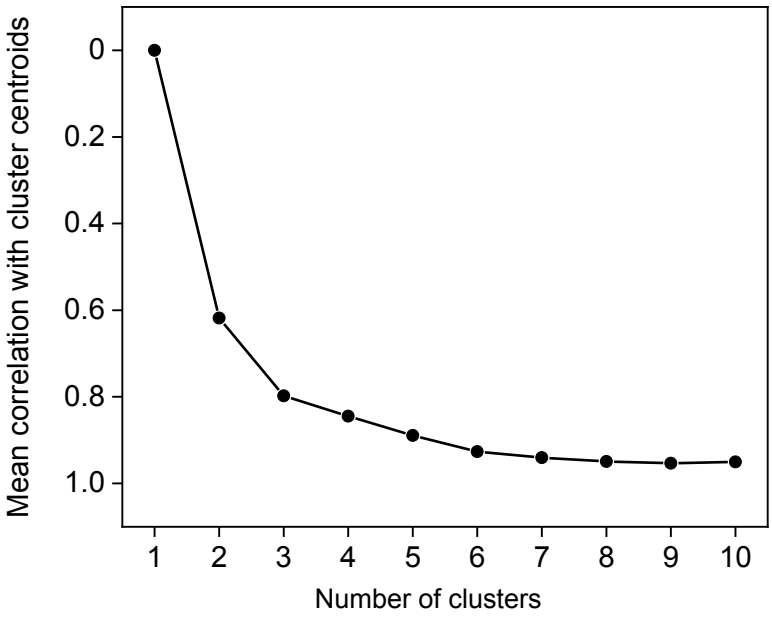
Supplementary Figure S3. Raman imaging of wood. A false-colour Raman image generated by applying a sum filter to the spectral region 1550-1700 cm^{-1} (a). The image reveals the cellular structure of pine heartwood, showing tracheid cell walls (1), middle lamellae (2), cell corners (3), cell lumens (4) and extractive deposits (5). To examine local differences in composition, average spectra can be extracted from regions of interest by selecting the relevant areas (blue and red boxes in panel a) on the image (b)



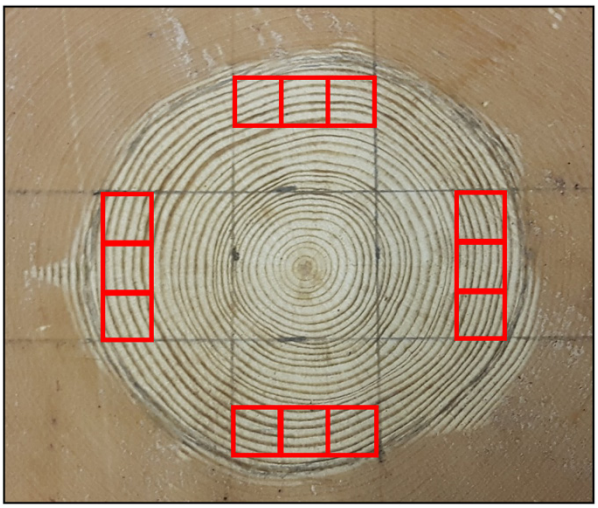
Supplementary Figure S4. Average cell wall Raman spectra before (a) and after (b) baseline correction and normalisation



Supplementary Figure S5. PC1 vs PC2 score plot



Supplementary Figure S6. Mean correlation of pixels with the respective cluster centroids at different numbers of clusters



Supplementary Figure S7. Sampling of outer heartwood. Long sticks were cut from the positions indicated on the image, after which the sticks were planed and cut in length to produce the final samples