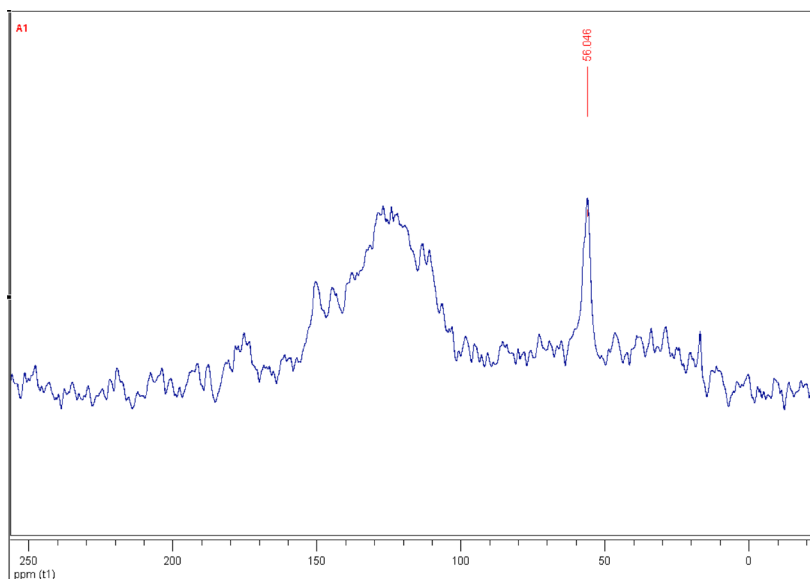
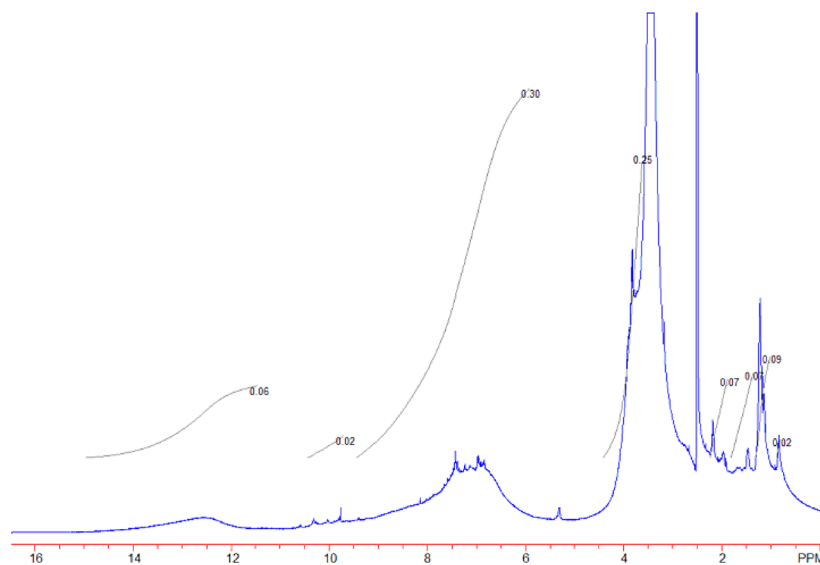


# Novel water-soluble lignin derivative BP-Cx-1: identification of components and screening of potential targets *in silico* and *in vitro*

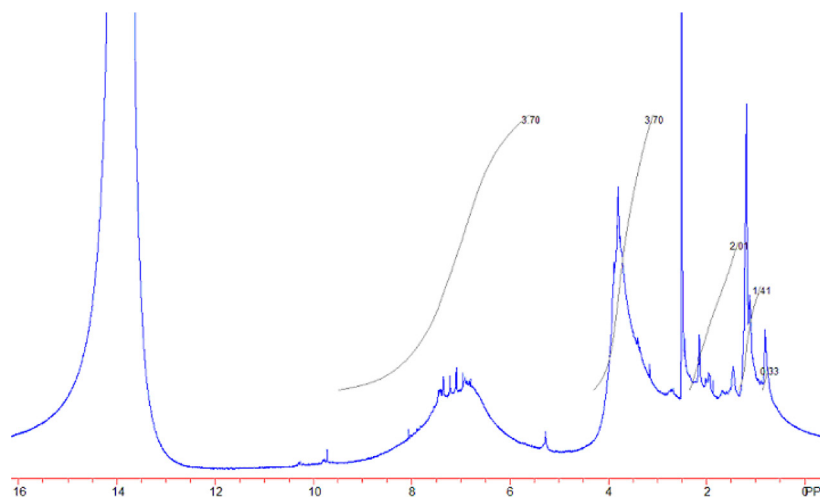
## SUPPLEMENTARY MATERIALS



Supplementary Figure 1: <sup>13</sup>C NMR spectrum of BP-Cx-1.



**Supplementary Figure 2:**  $^1\text{H}$  NMR spectrum of BP-Cx-1 in  $\text{DMSO-d}_6$ . Signals from  $\text{OCH}_3$  groups in 3.3–4.3 ppm region overlap with  $\text{H}_2\text{O}$  signals.



**Supplementary Figure 3:**  $^1\text{H}$  NMR spectrum of BP-Cx-1 in  $\text{DMSO-d}_6$  with addition of TFA 20%. Signals of mobile protons ( $\text{H}_2\text{O}$ ,  $\text{COOH}$ ,  $\text{ArOH}$ ) overlap with TFA signal (13–15 ppm).

**Supplementary File 1: Diversity\_profile\_binding\_assay\_results.** See supplementary\_File\_1

**Supplementary File 2: ChEMBL\_compounds\_bioactivity\_profiles.** See supplementary\_File\_2

**Supplementary File 3: Fitness\_of\_a\_chembl\_compound\_to\_the\_bp-cx-1\_bioactivity\_profile.** See supplementary\_File\_3

**Supplementary File 4: Diversity\_profile\_binding\_assay\_methods.** See supplementary\_File\_4

**Supplementary File 5: Formulae\_identified\_in\_fticr\_mass\_spectrum.** See supplementary\_File\_5

**Supplementary File 6: Formulae\_were\_generated\_and\_extracted\_from\_mysql\_chembl\_using\_molecule\_dictionary.  
full\_molformula\_field.** See supplementary\_File\_6

**Supplementary File 7: Compound\_properties.molregno\_primary\_keys.** See supplementary\_File\_7

**Supplementary File 8: Fields\_target\_dictionary.pref\_name\_and\_assays.description.** See supplementary\_File\_8

**Supplementary File 9: Python\_script.** See supplementary\_File\_9

**Supplementary File 10: Assays\_found\_by\_fields\_target\_dictionary.pref\_name\_and\_assays.description.** See supplementary\_File\_10

**Supplementary File 11: Chemaxon\_standardizer\_v.16.8.29.0.** See supplementary\_File\_11