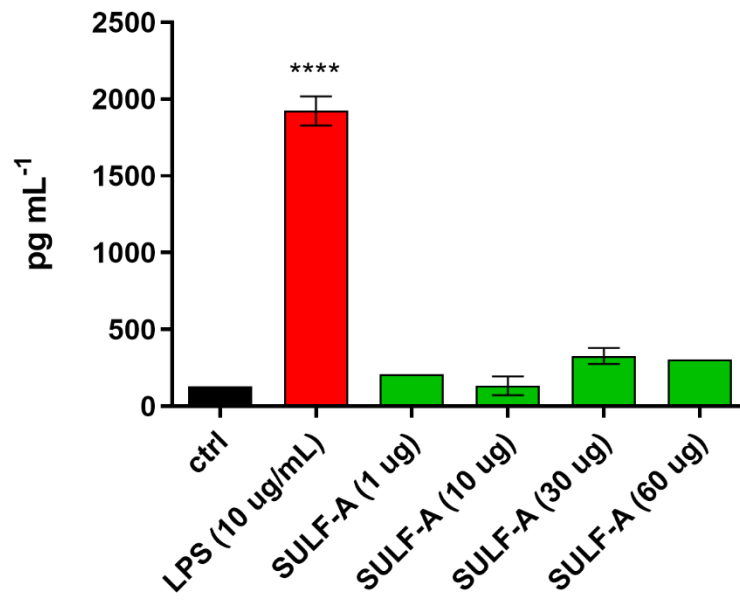


## **Supplemental Information**

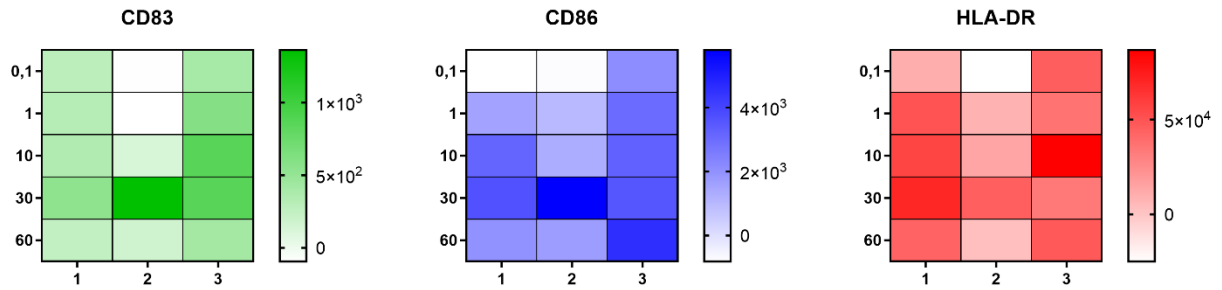
**A new bioassay platform design for the discovery of lead compounds with anticancer and immunomodulant activity**

**Figure S1**



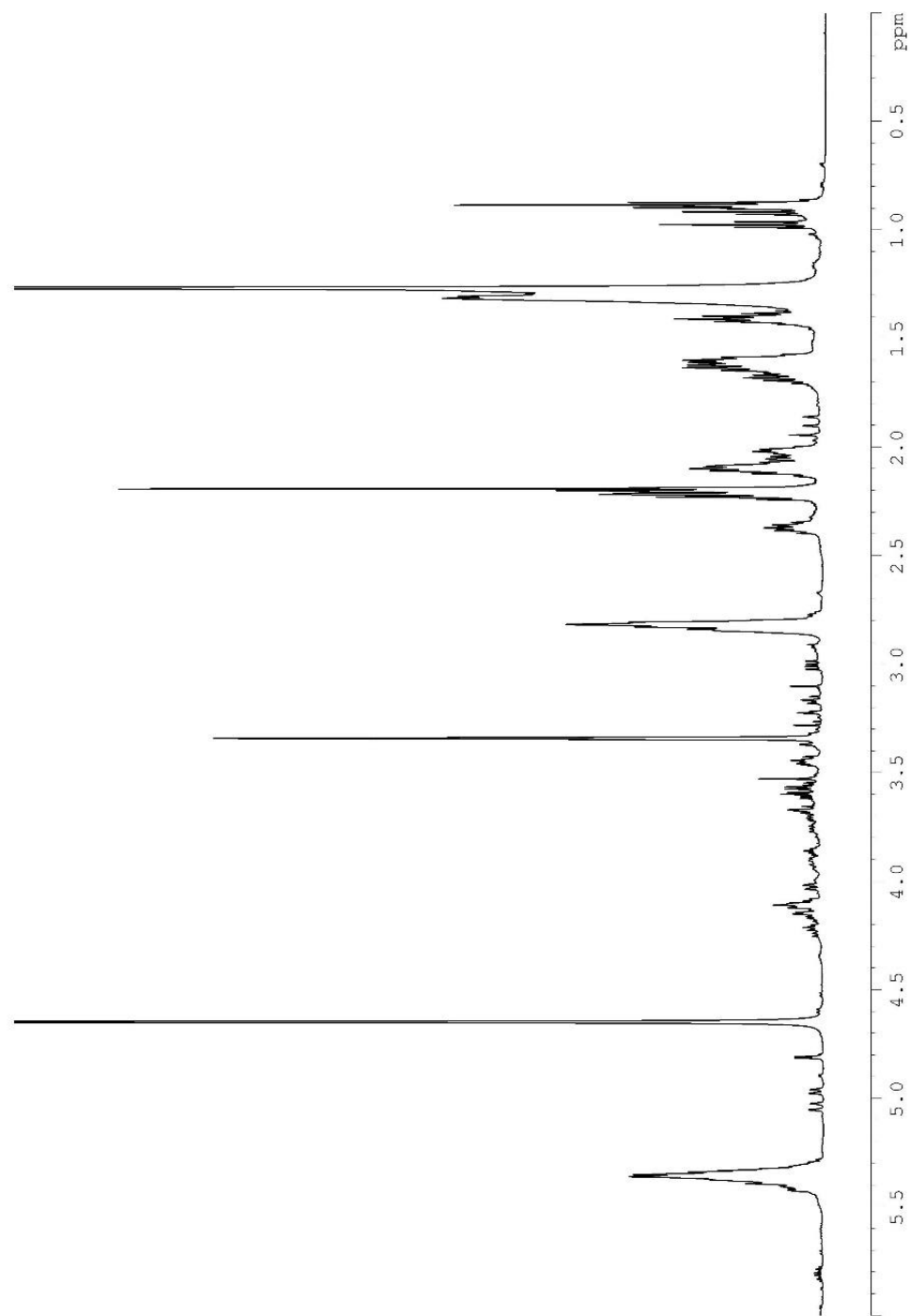
**Figure S1.** TNF- $\alpha$  production (pg mL<sup>-1</sup>) measured on D1 cell supernatants in untreated cells (ctrl) and cells treated with LPS and Sulfavant A (SULF-A) in the range of concentration from 1 to 60  $\mu$ g mL<sup>-1</sup>. The assay was performed by TNF- $\alpha$  ELISA kit (Thermo Scientific).

**Figure S2**



**Figure S2.** Surface expression analysis of CD83, CD86 and HLA-DR in moDCs from 3 donors (1,2,3) treated with Sulfavant A at the concentrations showed on the y axis ( $\mu\text{g/mL}$ ); All data were normalized to the cells treated only with the vehicle (MeOH). The color bar on the right shows the MFI (Mean Fluorescence Intensity) measured for each marker.

Figure S3



**Figure S3.** 1H-NMR spectrum (600MHz, CD<sub>3</sub>OD:CDCl<sub>3</sub> 1:1 v: v) of active C fraction obtained by HR-X fractionation of *Thalassiosira weissflogii* extract, that showed an enrichment of  $\alpha$ -SQDG (Manzo et al., 2017).

Figure S4

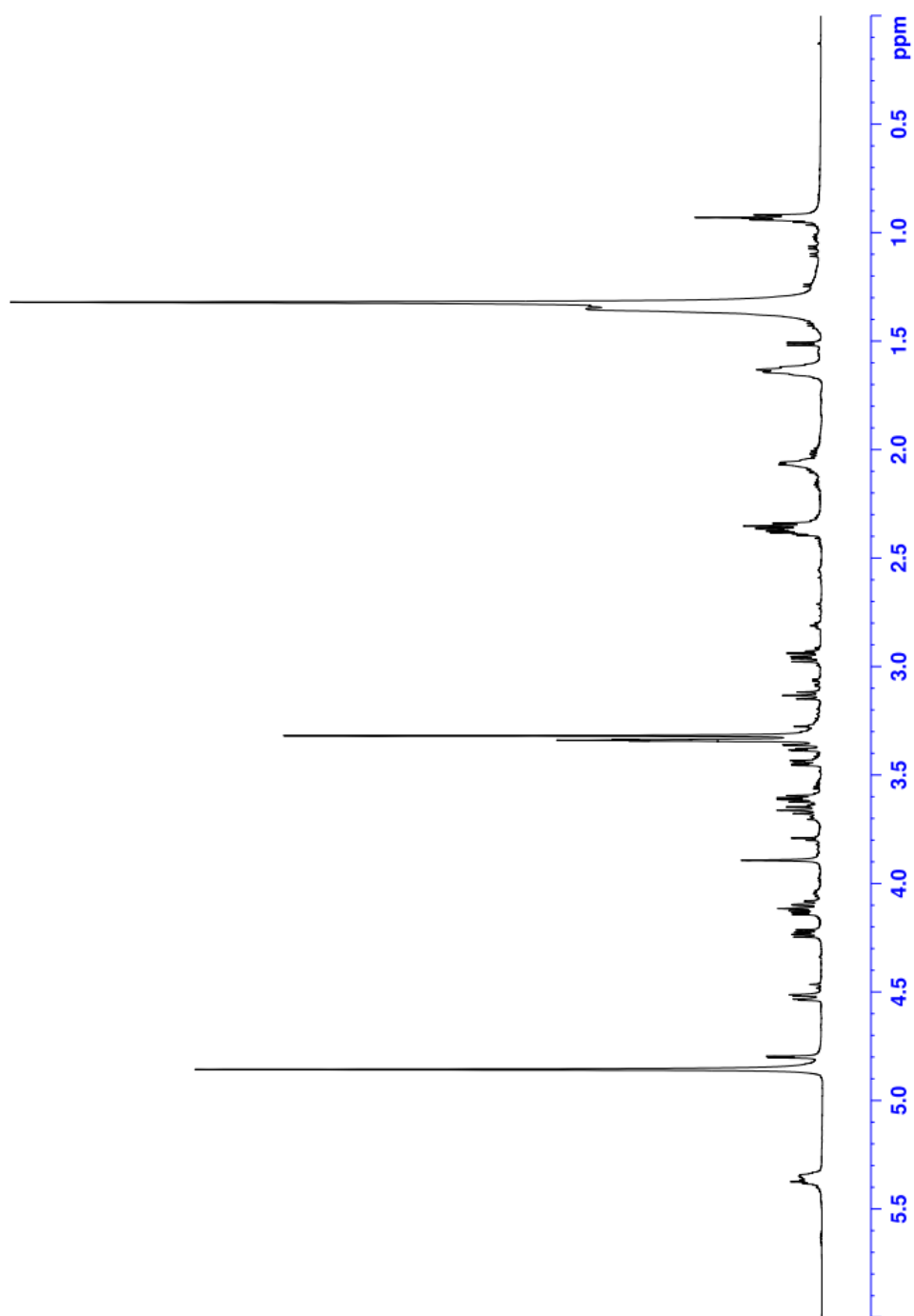


Figure S4. <sup>1</sup>H-NMR spectrum (600MHz, CD<sub>3</sub>OD) of α-SQDG from *Thalassiosira weissflogii*.