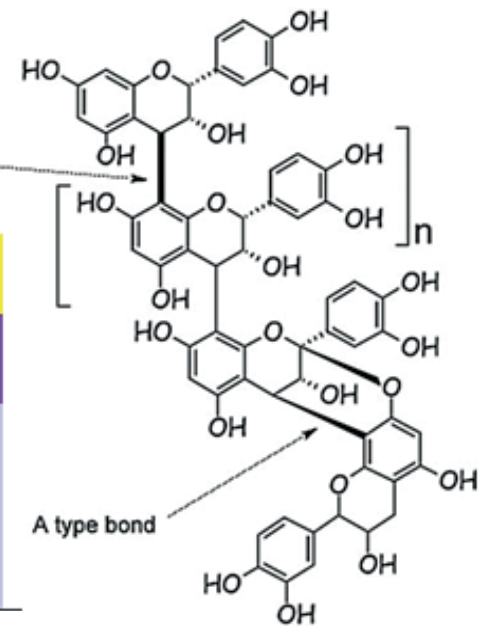
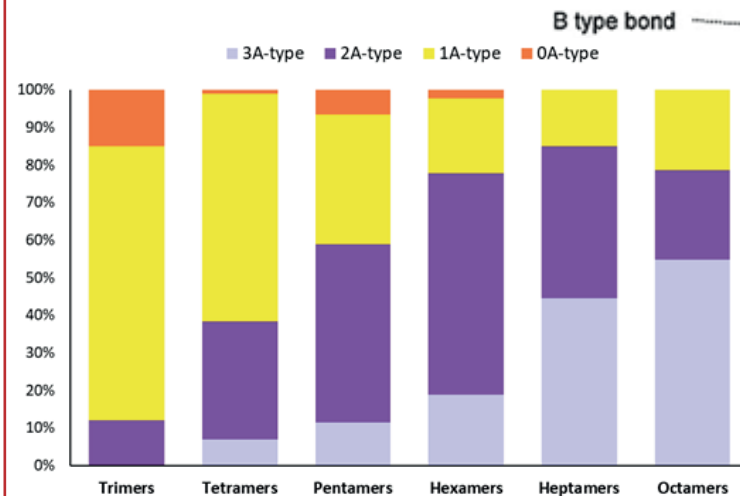


A patented formulation based on *Pinus pinaster*, *Vitis vinifera*, *Arachis hypogaea* and *Vaccinium vitis-idaea* with the highest standardized content of proanthocyanidins (370-800 g/kg) on the market

# CalSP4



The highest percentage of A-Type PACs with increasing degree of polymerization



<https://doi.org/10.3390/antiox11071234>



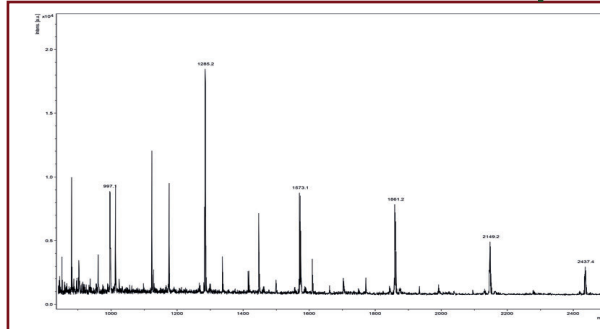
## Calliero

CalSP4 powder extract with 37%-80% total proanthocyanidins (PACs, BL-DMAC) with a standardized 60% of A-type PACs (LC-MS/MS)

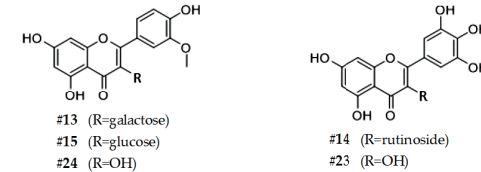
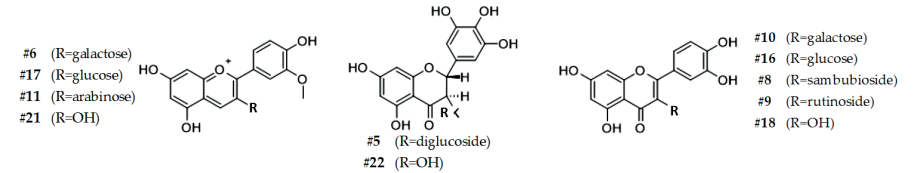
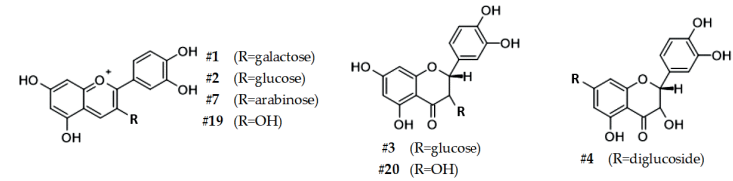
# CalSP4

A patented formulation based on *Pinus pinaster*, *Vitis vinifera*, *Arachis hypogaea* and *Vaccinium vitis-idaea* with the highest standardized content of proanthocyanidins (370-800 g/kg) on the market

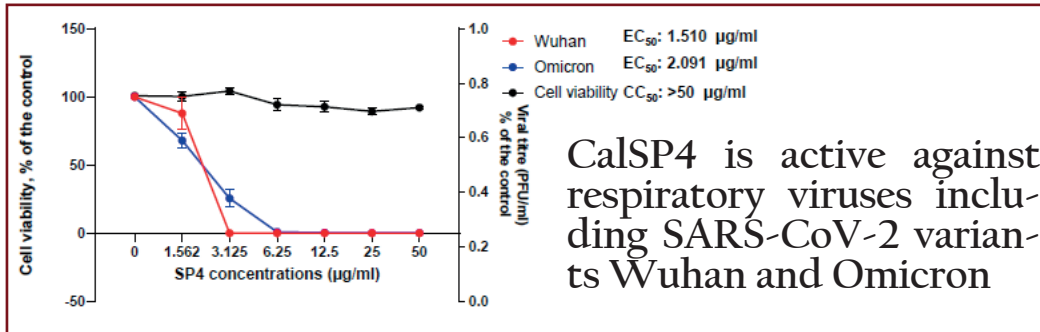
## SCIENTIFIC EVIDENCE



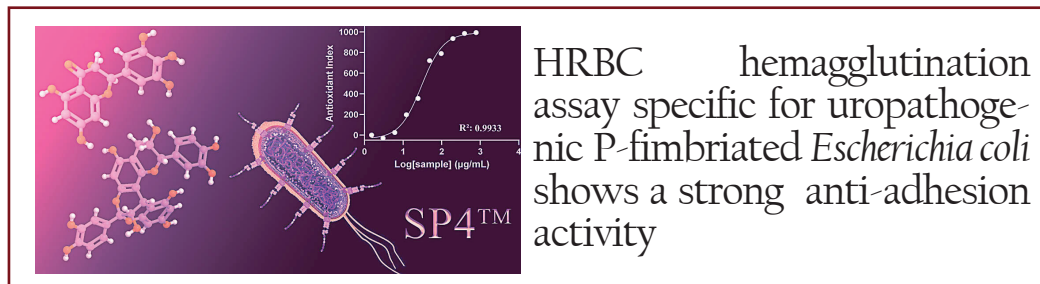
MALDI-QTOF analyses confirm the degree of polymerization and the high percentages of A-type linkages of CalSP4 PACs



CalSP4 UHPLC-ESI-MS/MS analyses revealed the presence of a wide array of antioxidant polyphenols with an  $EC_{50}$  of 30.11  $\mu$ g/ml similar to BHA and BHT, twice as much that of resveratrol and 21 times the antioxidant activity of epicatechin. <https://doi.org/10.3390/antiox11071234>



CalSP4 is active against respiratory viruses including SARS-CoV-2 variants Wuhan and Omicron



HRBC hemagglutination assay specific for uropathogenic P-fimbriated *Escherichia coli* shows a strong anti-adhesion activity

ELISA test and the DNA-Real-time PCR method reveal that the ALLERGEN CONTENT of peanut allergens of CalSP4 is hundred times below the threshold limits.



Calliero

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