The impact of CO2 increase on plants secondary metabolites

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The concentrations of atmospheric CO2 have increased from 350–360 ppm in the 1990s to the current 419 ppm (in May 2021). The increasing CO2 concentration could be helpful for plants growing because it leads to an increase in the rate of photosynthetic carbon fixation, which causes an increase in biomass production. Even more, the plants have been suffering less from biotic stress as elevating carbon dioxide could prevent mold and fungi formation.

In the present study, we test different plant species from Brassicaceae family (*Brassica oleracea, variety capitate, Brassica oleracea, variety botrytis, Sinapis alba, Raphanus sativus, Brassica oleracea, variety italica*) grown at three carbon dioxide concentrations (400, 800, and 1200 ppmv) to test the influence of elevated carbon dioxide on volatile organic compounds emission, photosynthetic parameters, chlorophylls, and carotenoids. We have been shown that different plant species react specifically to increasing carbon dioxide, and their metabolic profiles are changing.

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