

## **An isotopic approach to study sulphur assimilation by plants**

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Despite being a microelement, sulphur plays a crucial role in ecosystems. In fact, sulphur is present in many molecules and is absolutely necessary for biosyntheses (proteins, secondary metabolites, anti-oxidants) in living organisms. Within the sulphur cycle, many uncertainties remain on the effect of changing environmental conditions on S absorption and assimilation by plants. To address this point, we used a set of *Arabidopsis thaliana* mutants in which the regulation of sulphur metabolism is altered and carried out <sup>34</sup>S labelling experiments. The measurement of the sulphur isotopic composition ( $\delta^{34}\text{S}$ ) of total organic matter of these plants allowed us to draw hypotheses on key metabolic steps of sulphur assimilatory pathway in plants.