

Review of: "A peroxisomal heterodimeric enzyme is involved in benzaldehyde synthesis in plants"

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The present manuscript provides a significant advance in the diversity of function exerted by plant peroxisomes using petunia as a model. Specifically, it is shown at the biochemical level that the enzymatic activity that catalyzes the formation of benzaldehyde in petunia flowers, localized in peroxisomes, is a consequence of the heterodimeric union of two subunits, alpha and beta, which are strictly necessary for the activity to be functional since they alone do not work. However, in the discussion section, I would have suggested that the authors put a special focus on the diversity of functions exerted for **plant peroxisomes**, organelles that have an eminent nitro-oxidative metabolism and that are a source of signaling molecules such as hydrogen peroxide, nitric oxide. Likewise, molecules derived from β -oxidation such as jasmonic acid and indole acetic acid that act as phytohormones are involved in a wide variety of processes. On the other hand, considering that the biosynthesis of benzaldehyde required NADPH, it should be nice to mention that plant peroxisomes have several **NADPH-generating enzymes** including NADP-isocitrate dehydrogenase as well as the two components of the oxidative step of pentose phosphate, glucose-6-phosphate dehydrogenase and 6-phosphogluconate dehydrogenase.

Therefore, I congratulate the authors for their contribution that broadens our vision of plant peroxisomes which have a versatile metabolism.