

MtYSL1: a putative metal transporter involved in *Medicago truncatula*-*Sinorhizobium meliloti* symbiotic interaction.

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Leguminous plants are able to grow under nitrogen-limiting conditions by establishing an endosymbiotic interaction with diazotrophic soil bacteria known as rhizobia. This interaction results in root structures, nodules, where rhizobia are differentiated to bacteroids and symbiotic nitrogen fixation (SNF) occurs (Van de Velde et al., 2006). Key enzymes involved in SNF require metals as cofactor to carry out their catalytic activity such as nitrogenase, leghemoglobin, cytochrome oxidase and superoxide dismutase. Previous results in *Medicago truncatula* showed that metals have to be provided to the bacteroids by the host legume, being released to the apoplast of zone II (infection/maturation zone) of the nodule (Rodríguez-Haas et al., 2013). It is known that Yellow Stripe-like (YSL) transporters mediate metal trafficking from the root to sink organs, however, no information of the role of these transporters in the context of SNF is available. *Medicago truncatula* YSL1 is a good candidate to mediate this transport, since it reaches an expression peak in these organs. MtYSL1 was localized around the vascular conducts of nodules and, in the root pericycle. MtYSL1 immunolocalization showed that it was embedded in the plasma membrane of non-infected cells surrounding the vessels. These results suggest a role of MtYSL1 in metal delivery to *M. truncatula* nodules.

Rodríguez-Haas B, et al (2013). *Metallomics* 5: 1247-1253

Van de Velde W, et al (2006). *Plant Physiol* 141: 711-720.

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