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Major: Biology

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Silencing of three members of the cytochrome p450 family of genes to uncover their role in iron regulation in *A. thaliana*

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Iron absorption and distribution by an organism needs to be tightly regulated because iron is essential but in excess it can be dangerous and may even result in death. Through microarray analyses of iron-starved Arabidopsis plants (WT and a mutant) we discovered that three members of the Cytochrome p450 family of genes are up-regulated under iron deficiency. The genes are At4g31940, At4g31950 and At4g31970 and they are highly homologous to each other. Individual Arabidopsis knockouts do not show a phenotype suggesting that their function may be redundant. Since obtaining a triple mutant plant via crossings of individual KO lines is not achievable due to the three genes being tightly linked, here we employ a RNAi strategy to silence them. This approach will enable us to gain further insight into their role in iron homeostasis.