Plants are always affected by a lot of environmental factors, such as high and low temperatures, water and/or nutrition deficiency and etc. However, by using various mechanisms properly and systematically, plants can survive these stressful environments. In these environmental adaptations, we are focusing on the relationship between inorganic ions and plant. Under the nutrient deficient conditions, plants activate the mechanisms for acquiring inorganic nutrient ions. On the other hand, under the conditions existing toxic levels of ions, they will activate the mechanisms for sequestration and/or detoxification of excess amount of ions internally and externally. By using these mechanisms, plants can maintain its homeostasis and adapt to the environments.

Through the research of their environmental adaptation mechanisms, we want to understand their strategies and want to find the way how to utilize their functions in our human activities, such as phytoremediation and phyto-fortification.

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